

JOURNAL

OF THE

United Service Institution of India

INDEX

VOL. LXIV.

JANUARY—OCTOBER, 1934

Published under the Authority of the Council

LAHORE :

PRINTED BY E. G. TILT, MANAGER, AT THE "CIVIL & MILITARY GAZETTE," LTD

1935.

Journal of the United Service Institution of India.

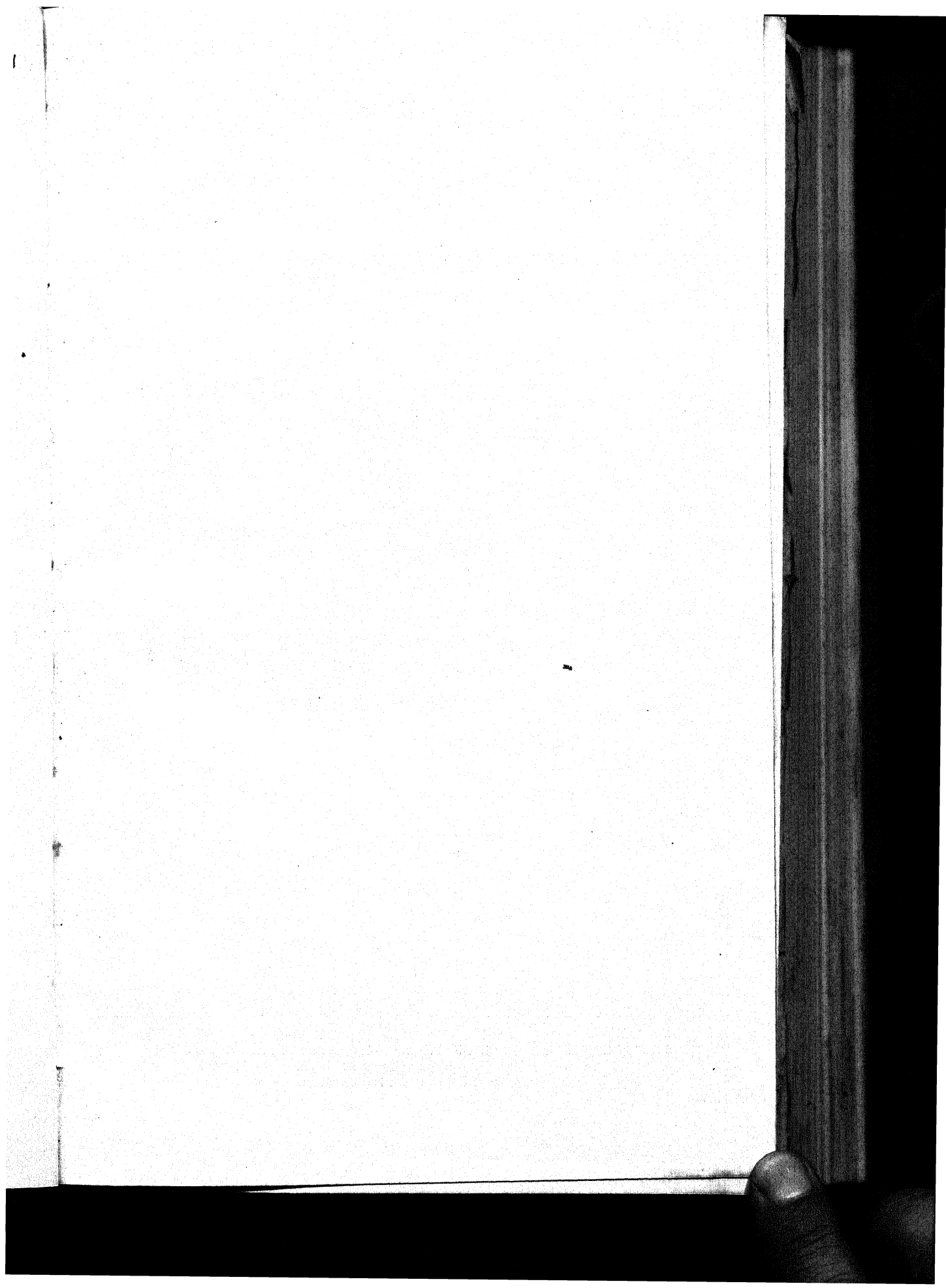
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HIS EXCELLENCY THE EARL OF WILLINGDON, G.M.S.I., G.C.M.G., G.M.I.E., G.B.E.,
Viceroy and Governor-General of India.
Patron of the U. S. Institution, India.

FOR REFERENCE

Not to be taken out

The Journal

OF THE

United Service Institution of India.

Vol. LXIV. JANUARY, 1934. No. 274.

The views expressed in this Journal are in no sense official, and the opinions of contributors in their published articles are not necessarily those of the Council of the Institution.

EDITORIAL.

Our readers in India are familiar with the slipshod producer of amateur theatricals who, at the conclusion of a bad Pensions. rehearsal, tries to reassure his *dramatis personae* with the optimistic phrase:—"It will be all right on the night." In six cases out of ten the optimism proves to be justified; in the other four cases the opening night is a complete flop. To our mind the British Government's attitude towards the question of pensions is analogous to that of an optimistic, but rather reckless, producer.

At a recent meeting of the India Defence League, a body for whose methods we have no particular regards nor towards which we can extend blind sympathy, there was an interesting and very important debate regarding the security of pensions in India. Many of the speakers, distinguished pensioned civil and military officers of the Government of India, gave voice to their apprehensions regarding the vulnerability of the safeguards as at present designed by the White Paper to secure the payment of pensions earned in India.

The Secretary of State for India has, in a letter to the press, stated the case for the British Government, and it is, in its appreciation of the problem and sympathy with the services, characteristic of the thought and sincerity which Sir Samuel Hoare has brought to bear on all the mass of Indian problems during the last two years. Briefly, the British Government's attitude is as follows:—

1. The question is still under consideration until the Joint Select Committee's Report is submitted to Parliament, and it is

"inconceivable" that "Parliament subsequently will pass a Bill embodying a new Constitution for India, without satisfying themselves as to the security of pensions earned by service under the Crown in India."

2. "Under the White Paper proposals the money necessary for the payment of pensions.....will not require to be voted by the Indian Legislature; the authority of the Governor-General alone will be necessary for disbursement..... It will be clear, therefore, that the White Paper proposals place ample powers in the hands of the Governor-General, who will in this regard act in responsibility to Parliament to prevent repudiation."

3. "Moreover, the White Paper includes a scheme of financial safeguards which are designed to secure the financial stability of India."

4. *Fund Pensions.* "The case of Fund Pensions calls for special comment. They are of two kinds. First, there are pensions granted under the rules of funds established in the days of the East India Company, which were taken over by the Government under Acts which conferred on the pensioners *a legal right to receive payment from the revenues of India* at the rates laid down in the rules. These pensions are in the same position, in the matter of security, as pensions granted to officers on retirement and, like them, will receive the benefit of the safeguards mentioned above.

Secondly, there are pensions payable under the pension schemes to which serving officers now subscribe. These schemes are mutual insurance institutions, the pensions being provided, with minor exception, entirely from the contributions. The constitutions of the several funds provide for the payment of contributions into the general revenues of the Government of India, and the balances from which the pensions must ultimately be met, *are therefore represented merely by an obligation on the part of the Government of India.* His Majesty's Government have, in the preamble to the White Paper, recognized the fact that these balances have been built up of contributions by the Services themselves and that the wishes of the subscribers are therefore entitled to special consideration. A scheme for the gradual investment of the balances in sterling securities has been submitted to subscribers. Their replies have recently been received and proposals, giving effect so far as possible to their wishes, are being submitted to the Joint Select Committee. Should these

proposals be adopted, the pensions will at the end of a period be drawn entirely from sources outside the control of the Government of India; during this period they will, to the extent to which they are dependent on balances remaining in the hands of the Government, be protected by the safeguards which have been described." (*Our italics.*)

On their face value these proposals are sufficiently comprehensive to show that the question has received, and is receiving, close attention, and that its authors are satisfied with its integrity. But when examined from the viewpoint of the present generation which has witnessed during the last few years the fragility and elasticity of solemn treaties both abroad and within the British Empire, there are grounds for regarding these paper devices with a sceptical, if not jaundiced, eye. The cases of the Irish Free State and Ceylon are remarkable instances of the British Parliament's impotence to deal with situations arising from the peculiar and artificial virginity imposed upon our latest self-governing colonies. As regards the pensions of Indian Army Officers, it has been stated in Parliament that these "are not guaranteed by the British Government. They are a charge on Indian revenues and the responsibility of ensuring that the necessary funds are forthcoming rests with the Secretary of State for India." Under the White Paper proposals this means that the Governor-General will be empowered, if ever the evil necessity arises, to authorise the necessary money personally over the heads of his Chancellor of the Exchequer and the Indian Legislatures. We have had experience already in India—and more strikingly in Ceylon—of the unpopularity of this power of veto, and we can visualise many occasions when this over-riding authority of the Governor-General will have to be used as a weapon for compromise on more important issues. The British Government and the Indian delegates to the J. P. C. asseverate that the necessity will probably never arise; but we feel that it is too late in the day to ask people to pin their faith on the word, written or spoken, of transient politicians, unbacked by definite measures to protect its sanctity.

We believe in their sincerity but we beg leave to doubt their judgment. A perusal of the Congress papers and the statements of Indian "Nationalist" politicians show clearly that once the Congress gains constitutional power in India—a certainty within the next ten years—one of their first amiable tasks will be to repudiate

this 5 per cent. claim on India's revenues. Their leaders have said so with admirable candour and we are inclined to believe them. A weak Viceroy in power and a Secretary of State with political ambitions plus an accommodating conscience could easily, between them, drive a state carriage through the present "safeguard" proposals. For these reasons we share General Sir George Barrow's apprehensions and would feel more contented with our future prospects if the British Government would give a definite, unequivocal assurance that pensions would be paid, together with a statement of the practical measures designed to implement this assurance. Their present unwillingness to give such an assurance raises the doubt that perhaps they dare not say even that "it will be all right on the night." If this is so, it would be fairer to the principal actors in the cast to tell them.

Every great nation in the world is adding to its armaments and the word "Disarmament," so stressed at Versailles and other European and American Conferences is now regarded by all the civilised powers to be as unreal as the word "Prohibition" has been understood in the U. S. A. for the last twelve years. At the end of the last great war there was a genuine desire by all the peoples who suffered in it to abolish this expensive and painful method of settling differences between nations. The fact that all the countries engaged had to mobilise all their civilian man and woman power brought home to civilians that an international struggle of this modern type brings more death than wealth, and gradually crystallised the idea among men that all wars are futile. For this reason the League of Nations and its innumerable pacifist (in its best sense) offspring tried hard to maintain peace.

Why the League of Nations has so egregiously failed is difficult to define, but when its published deliberations are surveyed, the truth can hardly be avoided that no great or strong policy can be produced, enunciated or enforced by a collection of temporarily chosen spokesmen of temporarily selected governments placed in power by wobbling democracies, suffused dictators and bankrupt republics. The League has never had solid foundations and it is now propped up only by England, France and Italy. To support these three important powers there are China, Czechoslovakia, Guatemala, the Irish Free State, Mexico, Norway, Panama, Poland and Spain; these countries form the Council Membership for 1932-1933. The United States of America, Russia, Japan and Germany are not

members, nor are Afghanistan, Danzig and Egypt. When one compares the ideals upon which the League was founded with its present shadow existence, there are reasons for both laughter and sorrow.

If the statesmen who signed the Treaty of Versailles did so in the belief that the treaty was an insurance for peace, we can laugh at them and their childish pretensions ; but the other aspect of the seeds sown since Versailles which may produce war are not a subject for derision but a matter which we have all got to face. We have no desire to make mountains out of molehills in any military sense nor do we wish to raise any military bogeys, but there are definite and unmistakable tendencies in all countries which are boiling up to one point only—War.

Let us survey them briefly. Firstly this table, compiled by the League of Nations, showing the military budgets of the seven great powers at three distinct periods, the pre-war, the disarmament years, and in 1930-31 will bear scrutiny, especially when it is remembered that the 1931 figures are now considerably greater :—

	1913-14.	1920-27.	1930-31.
	(In millions of Dollars)		
Great Britain ..	375·1	564	535
France ..	348·7	210·5	455·3
Italy ..	179·1	207·8	258·9
Japan ..	95·5	212	232·1
Russia ..	447·7	362·9	579·4
U. S. A. ..	244·6	591·5	727·7
Germany ..	463·3	156·6	170·4

In Europe Germany has kicked over the traces and resigned the membership of the League. Under Article VIII of the Treaty of Versailles she promised to reduce her armaments " to the lowest point consistent with national safety and the enforcement by common action of international obligations," and the League ensured her security. Now, half a dozen states contiguous to her Nazi frontiers are re-arming. France, who has consistently maintained a stubborn attitude regarding her own ideas of personal security, remains justified in keeping up the largest standing force in the world. Italy has no pacific illusions either ; a peace establishment of just under 250,000 troops with an airforce of 2,500 machines (c.f. Englands 75½ squadrons scattered over the Empire). It is idle to speculate about Russia who

has her own internal troubles but it is interesting to note her recent rapprochement with the U. S. A.

The reason for this new trade alliance may be found in the growing power of Japan in the East as well as America's immediate financial difficulties. After the successful defiance of the League regarding Manchuria, Japan has been able to control her own destiny, a comfortable but perhaps an intoxicating feeling. She is now spending sixty million on new warship construction—and her naval man-power is almost equal to that of Great Britain despite the London Treaty of the 5—5—3 ratio. Japanese underselling of Eastern markets is an ordinary "bazaar" phenomenon and merely adds resentment to her growing unpopularity. In the Middle East there are few signs of stability. In Iraq and Afghanistan two young Kings have succeeded to their respective thrones before either country has settled down or recognised the benefits of gradual constitutional development. We may hope that their experienced ministers will give sane counsel and ride them with a skilful snaffle.

In this present international turmoil it is impossible for the ordinary man to look ahead. We believe that in England there is a pessimistic tone abroad that another world war is coming within the next four years. The country is dividing itself into two camps; one to practise non-violence in its most pacifist form and the other to re-arm to the limit regardless of expenditure. Obviously the middle course, so appropriate for English minds and, incidentally, instructed in Field Service Regulations is the right one:—an army firstly to police the Empire. This is the sensible mean between hysteria and Imperial militarism, the present forms of sensational emotionalism produced and suckled by our daily tabloid press.

In the lull between the storms we feel that the League of Nations could do something of real practical value, and play a supreme part in the insurance of peace. It has been suggested that instead of holding abortive disarmament conferences there might be convened a small panel of distinguished intellectual statesmen collected from the chancelleries of the world, men trained by history and experience to observe all the straws which are blown, all the words that are said, all the fires that are lit and all the commercial jealousies which tariffs enflame, all these men—say twelve disciples—to *prevent the causes of war*. It would be their responsibility to observe, note and

report all the belligerent tendencies of the nations without fear or favour and it would be their almost impossible duty to force governments to publish unpalatable truths in "League Subsidised" newspapers. Such a body, if it could ever be brought to function, would command respect, it would undermine the mass propaganda war stunts of modern newspapers and it would play a far greater part for peace than any fantastic idea of an International League Force.

The Prize Essay, 1933.—In this issue we publish the best essay Frontier Mobility. received in 1933 on Subject II :—

"With the tendency of modern Organization towards Mechanisation, the increasing complexity of modern weapons and the dependency of troops on their maintenance services, it is asserted by many that regular troops are losing the degree of mobility necessary for the successful performance of their role on the North-West Frontier.

Discuss how this difficulty can be overcome so that freedom of action and tactical mobility are assured in the Army in India."

The essayist, "Borderer", bringing a pen as ready in criticism as it is tempered with historical and modern experience, argues most plausibly for the creation of another "Piffer" Force with its role the defence of the North-West Frontier. He proposes that the existing force of covering troops should be converted into a "Professional Frontier Force", and in support of his scheme brings a vast array of contention and a mass of ingenious *argumenta ad hominem*; unfortunately these contain also *argumenta ad ignorantiam*.

The creation of a dual army in India, one a Field Force for war and the other a professional N.-W. F. P. garrison is no new one. It existed to all intents and purposes during the days of the "Piffer" Force and it broke down before the onslaught of a large-scale war. Borderer dresses up the scheme ably and consistently, and clothes the idea with an attractiveness and practicability which are dangerously seductive. Indeed the best part of the essay, showing the sincerity as well as the constructive ability of the author, is the detailed scheme proposed for the conversion of the existing covering troops into a mobile self-contained force for permanent frontier service. We commend this to your notice, but we doubt if this proposal would work. We doubt if such a split in the Army in India would lead to efficiency. We doubt if it is practicable from the political, command

and administrative points of view. Further we feel that such a partition of service in India is opposed to all our training principles. It would lead to specialisation with all its narrow-mindedness and prejudice. There are other aspects also—Indianisation, recruitment, relations with political, army and governmental authorities, apart from the obvious inter-service jealousies which would arise,—which on study might persuade our readers that Borderer's 'best' scheme might yet be the enemy of the present 'good' policy.

Other means of increasing our mobility on the frontier are now commanding our attention and interest, and in this respect we have seen in recent years that the tribesmen are noticing it also. Road, motor transport and troops maintained for a short while on a 'blanket and bun' provide disconcerting acceleration in our tactical movements, and are bringing home gradually to the trans-border Pathan that his days will soon be numbered. Experiments in these directions are going on continually, troops are being accustomed to 'hard scale' operations which will enable them to compete with the excellent Scout traditions of movement, the maintenance services (mechanised) are becoming less mentally mechanised in their attitude towards mobility. The Air arm remains always ready on tap to remind the most inaccessible tribesmen of air potentialities.

Only the road policy remains sticky. The problem bristles with difficulties, some real and others artificial. Financial stringency cannot be blamed entirely for the slowness with which the road-making policy is being implemented. The Government of India has expressed its willingness to find money for capital projects of this nature provided the work is 'productive'. Communications are in the ordinary sense productive works, but in the peculiar circumstances which exist across the border roads become an annual liability because of the vicious Khasadari system. Until we harden our hearts and substitute for the system of bribery and blackmail known as Khasadari the old and well tried system of tribal responsibility any ordered plan of road construction is going to be difficult, if not impossible. When the roads are built, and despite present tendencies we feel that their construction sooner or later is inevitable, there will be no need of a 'professional frontier force' as visualised by the essayist.

ESSAY.

BY " BORDERER."

" With the tendency of modern Military Organisation towards Mechanisation, the increasing complexity of modern weapons and the dependency of troops on their maintenance services, it is asserted by many that Regular troops are losing the degree of mobility necessary for the successful performance of their role on the North-West Frontier.

Discuss how this difficulty can be overcome so that freedom of action and tactical mobility are assured in the Army of India."

(NOTE.—Neither the Council of the U. S. Institution nor the Judges of the Essay Competition, 1933, agree necessarily with the opinions of the author).

In considering the subject of this essay, certain questions must first be answered if any constructive result is to be obtained. Firstly:—

" It is asserted by many....." In this case is " Vox populi "—" Vox Dei " which is as though one said " Vox Veritatis "? I think we may concede that this is the golden exception ; the " many " in this instance are right ; for once " Vox Populi " speaks truth. A simple comparison of the North-West Frontier campaigns prior to 1917 with those of that year and of the succeeding decade and a half bear out the popular contention. A comparison of Neville Chamberlain's marches, or of Robert's movements, to take only two instances, with the progress of Derajat column in 1920 or of the Razmak force in 1930, force us, unwilling as we may be to admit deterioration, to the conclusion that the contention of the many is borne out by hard facts. Regular troops are losing, nay, have indeed already lost in great measure, the degree of mobility necessary for the successful performance of their *role* on the North-West Frontier. I say " on " meaning thereby in the tribal country between the administrative border and the Afghan frontier. Beyond that again in many places of Middle Asia, their present degree of mobility might be sufficient : their super armament and mechanised aids an advantage instead of an encumbrance. Which opinion bring us to a second consideration in the proposed thesis.

"the degree of mobility.....". Mobility is a purely relative term. At 20,000 feet altitude five hundred feet per hour is mobility. At sea level on a similar slope it is senile decay. Five miles an hour means highly mobile infantry but extraordinary snail

like mounted troops. The only measure of mobility that serves as standard of comparison is that of the enemy, in this case of the frontier tribes. . . . Are we right in seeking against them the type of mobility required of a modern force operating in the road strewn areas of the west of Europe ?

A third and last consideration refers again to " the voice of the many " who, claiming with considerable degree of supporting evidence that Regular troops on the North-West Frontier lack the necessary degree of mobility, attribute the default to the following cause :—
" the tendency of modern Military Organisation towards Mechanisation, the increasing complexity of modern weapons, and the dependence of troops on their maintenance services. "

Is this popular and perhaps facile contention correct or is it, merely another instance—by the soldier this time—of what Lothrop Stoddart calls the modern man's revolt against civilization ?

Troops may lack or lose mobility from the following causes :—

- (a) Lack of the will to risk and the will to fight on their own part or of their leaders. In the case under consideration we may dismiss this cause. The present generation of young soldiers is showing reactionary tendencies, becoming almost militaristic in fact, anxious to find an enemy to close with : modern youth is apparently developing what the doctors call a " resistance " to Pacifist propaganda.
- (b) Physical deterioration and softness from any cause. Any one who saw the troops of 1919-20 and then looks at those of to-day will dismiss this potential cause at once. Modern youth properly trained is capable of as great physical exertions as its grandfathers. I would go further and say it is capable of greater : each new mountain expedition proves it : the reason is simple,—increased knowledge, hard bought experience, greater willingness of modern youth to profit by its elders' mistakes and improve on their experience.

But there is the loophole " properly trained ". Are the Regular troops of India to-day properly trained ? We will examine this later meanwhile bearing it in mind as a possible cause not mentioned in the thesis which deals only with material facts of weapons and maintenance.

- (c) A third cause which may destroy mobility is unsuitable organisation for the task ahead. There is no perfect all-round organisation. The study of history shows that. There is only one guiding principle which cannot be broken with impunity. It is that an organisation must be suited to the people and the country from which the army is drawn. It must thereafter be adapted reasonably to the task that army has to carry out which in practice means the rôle most likely to fall to it. Are we perfect in this respect? Do we envisage our most likely rôle correctly?

Running with organisation goes equipment to which visible and tangible fact "the many" point as the cause of all the trouble. The tendency to mechanisation, the complexity of weapons, the consequent dependence of troops on large and complicated maintenance services are all self-evident facts about which we need not dispute. Before seeking some solution which may rectify things therefore, should we or not add to the materialistic cause mentioned any further cause?

Lack of the will to risk and fight, physical weakness or softness, may definitely be ruled out. Remain therefore only organisation, training, and the already indicated equipment including of course primarily, armament.

To see whether these require overhauling, we must firstly fairly envisage the task. What is the rôle of the regular soldier on the North-West Frontier? It is to impose the will of Government upon the Frontier tribes whenever political suasion and the power of Scouts and Constabulary prove insufficient. The more cheaply in cost of life this can be achieved, the more excellently does the soldier fulfil his task. If it can be achieved by men in tanks, invulnerable to the tribal armament, then let it be so done forthwith. Has man however yet invented the tracked armoured vehicle which can negotiate the frontier hills? Is he likely to do so in our lifetime? One is compelled in honesty to answer "no" to both questions, attractive as the idea of invulnerable irresistible small forces must be to any thinking soldier who dislikes needless waste of life.

In western Europe the possibilities are far greater. The country is utterly different, the tracked vehicle already seems able to move practically wherever its driver wills. At Koeniggraatz the Germans hammered the Austrians and the historian wrote at every thud the

echo shouted "the man who can load lying down will destroy the man who must load standing up." In western Europe to-day an equally far-reaching change is taking place; mechanically driven steel plate must destroy unarmoured flesh and blood.

Therefore the British Army including British units in India must conform or perish. But is it a corollary that the whole Indian Army must do so? Its most likely *rôle* is on the North-West Frontier and there the armoured vehicle can, owing to its own nature and the unchanging hills, play only a small auxiliary part. If the corollary does not exist, then both our present training and our equipment and armament are at fault since they are based, in tendency at least, upon the needs of western European warfare.

If the armoured fighting vehicle can be only, like the air arm, an auxiliary, we are then back at something older, the struggle of unarmoured men *versus* unarmoured men, and must train for that more primitive type of conflict. In such a form of warfare, assuming courage on both sides to be equal, victory will go to the men who have,—

"the better discipline,
the greater relative mobility,
the better leadership, and
the better weapons."

Regarding discipline we need not talk. The tribes have little or none. Regarding mobility, being in their own country, at all times and inevitably they will be slightly more mobile than we are. At present they are vastly more mobile, although the disparity need not be so lamentably great; there is no reason why it should not be reduced to what it was in the pre-war days of the Punjab Irregular Frontier Force, or as it is to-day with the Scouts. So long however as our training and our equipment tendencies continue as at present so long will that disparity continue to increase. Remain leadership and weapons. The leadership of frontier campaigns is the leadership of small forces; small mixed columns, the battalion with some mounted and artillery auxiliaries, the isolated company, and above all the platoon. Does our present system of training inculcate this leadership of small units or does it not rather visualise mass warfare on mass production pattern? Doubtless it is almost heresy to suggest this in the face of the many pamphlets and memoranda from A. H. Q.

and lower formations. But pamphlets and memoranda are only guides—human nature is the dominant factor. With the owls of Athene peering from Camberley and Quetta towards the flats of Flanders, the army in the mass inevitably does likewise. Some of them may think sometimes regretfully of the halcyon days when battalion and even company commanders fought battles on their own, organised unsupported and lonely attacks, marched thirty, forty, fifty, sixty, miles on their own to independent conflict. But sooner or later the inevitable daily pressure, the thought of promotion examinations, the talk of men from home, the necessity of satisfying Brigade and District Commanders, force them to turn their gaze to the operations of Allenby in Palestine or Haig in Flanders and they try once more to disentangle the choked movements of a division a welter of army corps. I submit our training tendency is wrong both for the leader and the men he leads. Wrong for the men he leads since they have inevitably become infected with what one can but call "communism." No longer is it their habit to follow man's most primitive instinct and "make do", extemporise, "help themselves." Over organisation makes them sit and wait open mouthed for what the Gods may drop in to their laps. In the case of the Army they wait for mechanical aids, irresistible land iron-clads, shattering giant howitzers, anything and everything except their own small bore weapons. From all they hear these apparently are really, despite the A. H. Q. pamphlets, merely annoyances which have to be cleaned and handled in certain ways lest the General's guard bring discredit upon its unit.

And weapons? If victory be to the better weapon, what must be the degree of superiority? "All the resources of modern civilization" preach the Fuller school, basing their appeal on the ordinary human being's dislike to being killed if a better weapon will ensure the enemy being killed first. Why then have we no. 17 inch howitzers operating against the tribes? Why do we use toys of six inch to enable us to advance slowly against an enemy whose best weapon is a stolen Government 303 rifle, whose average is a Kohat pass made imitation, and whose less well-armed "units" still fight with the single loading Martini action?

Because of course, superiority in weapons, like superiority in mobility is only relative. And since the two qualities dovetail inevitably, it must be compromise. Better armament yes; but how much better in view of the dominant necessity for being able to strike

the enemy swiftly, or upon occasion to run from him so that we may strike him better another day ; in other words for mobility.

The Scout whose brothers and cousins serve in their thousands in the Indian Army, banks on mobility, discipline and leadership alone. Mobility not much more than 10% less than the inimitable enemy, discipline and leadership 100% better. "Then" says he "with the self same rifle as the tribesman I'll knock hell out of him." But after the third drink late at night, if you be a friend, he will add parenthetically and "without prejudice," "Of course if they call our bluff and it comes to a really hot show we shall want you regulars with your heavier armament."

We may take it therefore from the Scout, who of all men in India really does know what he is talking about, that the reason and justification of the regular is that—he is more heavily armed. Therefore inevitably he must retain the Lewis Gun and the Machine Gun which the Scout will only accept as post defence weapons. He must bring also the 3·7 How., the best compromise of a killing tool which the mind of man has yet devised. If with those three refinements of scientific killing the regular soldier cannot impose Government's will on rifle armed men, then it is time he gave place to the Air Force, as a minority contend he should have done long since.

But if this be so what about all the more modern weapons, what about the complicated fireplans, the barrages and smoke screens, the massed machine guns, the Armoured Fighting vehicles and the huge mechanicalised train demanded by these cumbrous luxuries which in the West seem to have become necessities? Surely the answer is that for operations on the North-West Frontier, for the most likely rôle of a large minority of the Indian Army year in year out, they are unnecessary and worse than unnecessary, damaging. Damaging because they destroy mobility, damaging because they sap morale and initiative, damaging because they lead to an inevitable downpeering contempt among friend and foe alike, politely veiled sometimes on the part of the Scout, jeeringly open on the countenance of the more ribald tribesman; damaging because the necessity for their study prevents officers from studying their more likely rôle and training fully their men in that rôle which two matters are in themselves a fully whole time task.

Let us then therefore change things to the benefits of our fighting powers and incidentally to the benefit of the far from bottomless and

often terribly strained purse of that unfairly vilified abstraction the Government of India. Let us teach the man in the ranks and the Platoon Commander to rely first on his own rifle with the addition of the grenade if necessary, backing it up with the light automatic which he must render more mobile than it is at present. In graver trouble let them call upon their bigger brother with the Vickers Gun, and when things are really sticky let them ask for the final arbiter of frontier battle, the 3·7 How.

In peace time let us train men to be really killing shots with all these weapons, let us cut down the soldiers unnecessary kit so that the normal marching pace of infantry be four steady miles an hour and then emergency rush pace for an hour or two, five over hill and dale. Let the cavalry train their horses and the infantry and the gunners their mules so that they can at all times fulfil the proven boast of a certain Indian cavalry regiment, "our animals go wherever a man can go without using his hands for climbing." Can our average cavalry of to-day, can our Lewis and Vickers and mountain battery mules do that now.

Really hard training for man and animal alike is required. But the modern generation thrives on work ; gone never to return are the restful days of the Army. It would be hard training but feasible, though they will have to work hard five and a half days out of seven to achieve it.

Then what about all the other side of war, the methods and weapons devised in Western Europe ? They must inevitably go by the board, for there will not be time to study them. Men who are to have the eye for ground of the Afridi, the pace over hills of the Mahsud, the resourcefulness of skilful Wazir raiders, cannot in addition be masters or even amateurs of the changed methods of war of an irrevocably mechanicalised western world. But suppose the Indian Army is called upon to operate elsewhere than on the North-West Frontier ?

That is the crux of the problem. The ideal army would be able to operate anywhere. But then it must be fully equipped and trained for any warfare. The infantry battalion must contain mortars and anti-tank weapons, its transport must be mechanicalised for the Flanders plains or the more open stretches of Asia, its leaders must understand the latest methods of massed artillery. Equally it must be equipped with and trained to use pack animals. Is this even remotely

possible of achievement to-day ? And possessing all modern luxuries and necessities it must shelve them for most of its time in order to get on with its daily *rôle* nearer at hand. It must break its organisation every day of its life. It must do, as India has been tending to do ever since the Great War ended ; " Organise for the abnormal and ex temporise for the normal." Is that a sound principle ?

It is a pretty problem. I do not envy the authorities who to-day are definitely faced with it. I will ask a question. Is this *rôle* of the army on the North-West Frontier of India which is necessary in peace time required also in what we may call " War Time," by which I mean in time of Empire war ? Has it been in the past and will it be in future as necessary in " war time " as it is in normal peace time when we are merely operating against tribes North and East, against red shirts or Moplahs or joyous tattooed Burmese rebels ? A. H. Q. being honest will answer ' Yes.' History and the old Army lists will support A. H. Q. Some forty battalions with a proportion of mounted troops and light guns are required in peace or war alike to fulfil the army's *rôle* upon the North-West Frontier.

Taking then as proven fact the contention that no man or unit however industrious, self-sacrificing, and well willed can render himself perfectly efficient for both types of war since there are only 168 hours in the week and only 52 weeks in the year. Mussoliniwise I will trench the knot. I will permanently set aside my proportion of troops for the N.-W. F. *rôle*, and my Field Army (interchangeable with Internal Security units) will be practically the same size as before, and ready to operate in Flanders or the Caucasus, at Archangel or Shanghai. And just as the portion on the N.-W. F., shall become highly efficient at its rôle, so shall the Field Army become highly efficient at the other rôle, racing round the plains of India in Carden Lloyds moving 15 miles per hour over the Indian ' put ' in tracked vehicles, sleeping at Lahore to-night and at Delhi to-morrow. Its leaders shall be accustomed continually to the issuing of fireplans for massed brigades of heavy guns and serried phalanxes of tanks as easily and as efficiently as the leaders of the other portion echeloned along the N.-W. F., shall issue sound experienced orders, for the four miles an hour operations of small mobile columns chastising naughty tribes. Efficiency in both places : Money saved on the N.-W. F. head diverted to the pressing needs of the Field Army.

Just as the spirits of resentful Cardwell and the aura of the C. I. G. S. stand between the C.-in-C., and the decision which sooner or later he must set down upon the file, so now rise before me other spirits; honest Lord Kitchener flanked and supported by long gone Colonels of Bombay, Bengal and Madras units. I hear their protests, 'two types of armies' 'Specialists'troops rotting in down country station.

Safe in their incorporeality I reply. Civilisation demands specialisation; it is the hall mark of progress. Do units rot in Aldershot? Are the Guards mere painted shells because they never serve on the Indian frontier? That the long ago soldier in Central or South India might so rot was indisputable. But the reason was simple. War all over the world was much of one pattern. The soldier in India looked upon the N.-W. F. as the land of warlike hope where he might be tested and proved and perhaps gain his chance, and the great mass of the Bombay and Madras armies were denied service thereon. Only when necessity forced us over the hills to the more open reaches beyond and still more troops were required did they come up.

Not so to-day. Much of the Army in India looks to wider fields, fixes its eyes upon Aldershot, studies great scale war, laments sometimes at having to waste its time over the N.-W. F. which after all—say they—is only play. Not so long ago I attended a "Backward Boy" course where a distinguished Brigadier gave us a directive for our future.

"Regarding mountain warfare" said he in his valedictory oration "The last word on this was said by the author of the Chinese book of war written many hundreds of years B. C." He picked up an English reprint of the classics and read. "If the enemy be in the mountains—let him remain there—he is of no account." Yet would any one dare to say that such a high placed one has rotted? What was true of Kitchener's India is not true of India to-day. A Field Army in India trained and re-organised and inspirited as is the Field Army in England should in no way be a less reputable force in its own legitimate sphere, overseas or beyond the N.-W. F., as would be an equally specialised force organised and trained for operations in the tribal country.

The Army in India has reached, has indeed already more than entered the stage which with the advance of knowledge and material progress comes sooner or later to every art and trade and sets up

the insistent demand for specialisation since no longer can the human brain compete with all the fast growing branches of even one trade.

There is a broad Pathan proverb telling of the fate of the man who tried to maintain a foot in each of two boats. Its apposite quoting by a frontier political officer once stopped a war. The Army in India is like the victim of that proverb, the boats are diverging fast, and there is a limit to the stretching powers of the human anatomy.

The only possible way of salvation lies in a division of the Army in India, and I propose forthwith the reconstruction of a Frontier Force, a much increased, more highly organised frontier force than the original one, but nevertheless in principle the same. Like all solutions to all problems there are difficulties ; the second part of this essay will examine some of them and see whether or not they are surmountable and whether the proposal is a practical one.

PART II.

Under our present organisation the Army in India is divided into three parts, Covering Force, Field Army, and Internal Security. The component units are for the most part interchangeable and interchanged. Two of the reasons for the change are :

- (a) the desire to make everybody equally efficient at every branch of the fast growing trade of soldiering ;
- (b) the necessity to give troops certain periods of greater amenities than can be obtained on the frontier outposts.

It is this covering force that we are concerned with as the portion of the army charged with the *rôle* on the N.-W. F. both in peace and war. If the last war is to be taken as a precedent, then during the next one, the covering troops units will during its progress be gradually replaced by newly raised semi-trained units. That seems to spell a repetition of 1919-20, an unpleasant chapter in Indian History. The security of the frontier must be an even greater need in war than in peace. For the Field Army to be able to operate wherever wanted to its maximum efficiency, the well trained troops on the frontier must remain there lest the tribes, seeing less dangerous troops appear, raise hell, and upset everything. If this is conceded, one of the main arguments against specialisation immediately disappears.

The proposal for a Frontier Force therefore can be stated quite simply. The existing force of covering troops (I speak of strength, not of units on any given date) shall be re-organised as a professional Frontier Force.

Ideally this would cover the frontier from West to East. This however would involve incorporating the two Quetta Infantry Brigades in the Frontier Force since actually in that corner they really perform the rôle of covering troops. The Field Army already exiguous would thus be still further depleted.

Moreover, the Quetta plain and the country towards Chaman is the one point in the whole of the wide frontier where, possibly, troops organised and trained on European models might find scope. For this reason and for economy therefore let the western limit of the Frontier Force be set to include the Zhob Valley only. The two covering force units in the Quetta area should be withdrawn and added to the Frontier Force.

I postulated that the British Army must conform to Western Europe practice or cease to function. British troops in India are an integral and important part of the British Army. It is self evident therefore, that they can form no part of the proposed Frontier Force. Of their possible uses on the frontier I will speak later.

The covering force of to-day (including Baluchistan but excluding Zhob) is composed of the following units :—

Br. Inf. Bns.	..	4	(Landi Kotal, Peshawar, Nowshera, Razmak.)
Ind. Inf. and Gurkha Bns.		36	
Mountain Bties	..	9	
Br. Light Bties.	..	2	(Nowshera, Razmak).
Ind. Cav. Regts.	..	4	

The attached table "A" shows the composition of the proposed Frontier Force. The totals are five cavalry regiments, 13 mountain batteries, and 38 Indian infantry or Gurkha battalions.

The field army is thereby deprived of one cavalry regiment, two Indian battalions and four mountain batteries. I contend that this amount is a small price to pay for the greatly increased efficiency in both covering troops and field armies which would follow. With the greater mobility conferred by mechanisation it

should be easy to make a small re-arrangement in Internal Security dispositions and transfer this number of Internal Security units to the Field Army.

The reason for the suggested organisation and location is as follows :—

(i) On many parts of the frontier, units are more or less on field service conditions and deprived of their wives and families. The average man cannot be expected to endure this all through his service. Therefore for every unit in "Outpost" stations there must be a unit in a "peace station," i.e., a station where greater amenities and family life may be enjoyed.

Assuming that with the provision of family quarters Sandeman might well be ranked as a "peace station," it will be seen that there remain 19 outpost stations. The only change made from the present location of covering troops is that Manzai is assumed to be handed over to the Scouts or the Frontier Constabulary. Whether or not further reduction in outpost stations could be made is too big a question of policy to be included in this essay. But with the increased efficiency that would inevitably result from specialisation it might well become possible to reduce the numbers of units required in "outpost" stations.

All the cavalry being located in peace stations (less any detachments, e.g., Wana Squadron) there is no necessity to double their numbers. One cavalry regiment has however been added so as to give the Nowshera, Mardan, Malakand area a mounted Frontier Force unit. Otherwise they would have to rely on the unsuitably equipped and trained 1st Cavalry Brigade whenever, and it is often, that some mounted troops are required.

Both for historical and sentimental reasons, and to complete the number of 'peace stations' Abbottabad is included in the Frontier Force. It forms part of the N.-W. F. P., from the point of view of the Civil administration.

The three battalions and the mountain batteries in Abbottabad thus disappear from the Rawalpindi war division necessitating a reformation of one Infantry and one artillery brigade for which are available the British battalion and light battery in Pindi and the one Indian battalion saved on the sum total. This appears to be the only change effected in India's present war organisation by the

proposal. The replacement of the cavalry regiment taken from the 1st Cavalry Brigade should present no difficulty. Internal security duties elsewhere in India now allotted to cavalry could well be performed by semi-mechanised units.

Granted that it is accepted that the Frontier Force must be as specialised an organisation as a modernised field army or Expeditionary Force, then it is clear that its training must be kept separate. This is a further reason for ensuring that no Frontier Force units should serve in the Baluchistan area. That area would be essentially a 'westernised area' and its commander and staff should not be asked to undertake the responsibility of training and commanding the Zhob Frontier Force Brigade. Zhob should form part of Waziristan district, to which it more properly belongs and to which it is actually nearer.

It will be observed that the proposal suggests twelve Frontier Force Infantry Brigades each of three Indian battalions. In view of the actual location of the covering force units, three battalion brigades would be definitely a more convenient size. It would, moreover, enable complete Brigade reliefs to be introduced. H. Q. and units moving together, a most desirable change from the present system where the Brigadier finds his units changing year by year, which gives little chance of building up a true brigade spirit. Similarly the composition of the Frontier Force Mountain Artillery Brigade has been altered from four to three batteries, thus giving four brigades instead of three in the Frontier Force together with one unbrigaded battery.

The Brigade locations proposed and shown in Table "A" are as follows:—

Six outpost areas:—Khyber; Peshawar outposts; Kohat outposts; Razmak East; Razmak West; Wana.

Six peace areas:—Peshawar; Nowshera; Kohat; Bannu; Abbottabad; Zhob.

The three unbrigaded units required (Chitral, Malakand and Loralai) and an occasional inter-brigade transfer for any special reason would provide a small turn over. As will be seen from the sample reliefs (Table B-1 and B-2) a unit's turn 'unbrigaded' would

only come round about once in twelve years while change in the composition of a brigade would only take place about once in six years and then only a change of one battalion. For the purpose of these tables imaginary units are used.

The brigades stationed in the six peace areas would give the extra strength required in the event of operations of larger scale than the brigades in outpost could compete with.

The natural criticism will be raised that this necessitates the provision of four brigadiers, four brigade majors, four staff captains, one Lieut.-Colonel R. A. and one adjutant R. A. as well as additional clerical and other personnel, extra to the number already found in the covering force. The following steps would go some way to reducing the cost of the extra appointments :—

- (a) Make the command of a Frontier Force Brigade rank as a first grade staff appointment instead of a 'brigadier.'
- (b) Make Brigade Major of a Frontier Force Brigade a 3rd grade appointment.

Besides Infantry and Cavalry who would inevitably have to be units specially organised, equipped, and trained for their rôle, we require artillery, engineers and signals. Would it be desirable or necessary to have separate Frontier Force units of these arms ?

The actual work of technical corps does not vary so much in different theatres of war. But in the special case of the N.-W. F. the equipment and transport would inevitably be quite different from that of a modernised field army. If the units are made interchangeable then at each relief a big transfer of equipment and even armament must take place and consequently the unit will be more or less useless for many months to come from that cause alone quite apart from the training aspect.

On the other hand it is eminently desirable that such specialised units should remain in close touch with the rest of their corps so that they may gain advantage from experimental work carried out elsewhere. The Royal Artillery, the Royal Engineers (through the Sappers and Miners) the Royal Signals, should therefore maintain the required numbers of Frontier Force units, which however are not interchangeable with their other units. On the other hand officers, and possibly a proportion of N. C. Os. and men might be interchanged at intervals.

As regards the four British Infantry Battalions and the two British Light Batteries now on the frontier as Covering troops. For sentimental reasons as well as the very cogent one of utilizing existing accommodation, it would probably be desirable to retain these units in their present localities, despite their growing unsuitability if, as British units in India must inevitably do, they organise themselves on Western European models.

I suggest they should be attached to Frontier Force brigades as shown in Table "A." With only three battalions or batteries in the Infantry or Artillery brigade respectively, the administration and command of a fourth attached unit should present no difficulty to commander or staff.

Since the introduction of a Frontier Force will very greatly reduce the amount now spent annually on long relief moves and leave concession of Indian units, some of this saving might well be put to reducing the tour of these six British units on the Frontier area to say one year.

This would ensure their not losing too much in the way of training while serving in an area devoted to a rôle entirely different from the one for which all their normal training and equipment are directed.

Then arises the question of command of the whole Frontier Force. To place it under the G. O. C. in Northern Command would be to adopt the course already remarked on as unsuitable in Baluchistan. To make the G. O. C.-in-C., Northern Command commander of the Frontier Force would deprive us of the commander and staff of one of our biggest field army formations.

To leave the existing frontier districts as independent districts under Army H. Q. is one solution but not the most desirable one.

A specialist force of the size proposed requires its own commander and staff for both administration and training. If by any form of command and staff reorganisation elsewhere funds could be found, a commander and staff for the Frontier Force as a whole should be appointed and located either at Peshawar, at Dera Ismail Khan or at Abbottabad. The second named is central but not otherwise very suitable, the first and third are on one flank. But does this really matter nowadays with wireless and aircraft? Distance means so little when there are only two or three days in the whole year when

passenger flying is not possible. At Peshawar or Abbottabad the commander would be in close touch with the Governor of the N.-W. F. P. I think this advantage outweighs the fact of his not being centrally placed.

Lastly comes the question of the actual composition of the Frontier Force Infantry (including Gurkha Rifle) units.

There are two methods :—

- (a) Taking six or seven Indian Infantry regiments (according to whether the selected regiments have five or four or three battalions) and some Gurkha regiments complete.
- (b) Taking two or three battalions from every Indian Infantry regiment together with the required proportion of Gurkha battalions and thus maintaining a sentimental link with the rest of the Indian Army.

The great disadvantages of (b) are firstly, that it means that the training battalion would be trying to serve two masters, the Frontier Force and the modernised field army. It would inevitably fall between two stools in its training and fail also to satisfy the commanders and staff of its own area who in most cases would be commanders and staffs of field army formations.

Secondly, since officers in a regiment are interchangeable, we should once again be expecting the officer to be a master of all trades. To fit himself for promotion he would still have to study all forms of war.

For these two important reasons and for the fact that whenever possible one should preserve existing organisation, method (a) (selecting complete regiments) is the better one to follow. It, moreover, would make it easier to ensure recruiting the right type of man for the work. Most definitely there are right and wrong types. To maintain for instance that the Pathan is more suitable for all round use on the Frontier than the Mahratta, casts no reflection on the well proven fighting powers and high courage of the latter. It is merely a restatement of the old fact of round and square pegs. Nobody in their senses would take a waler to Tibet if hill ponies could be found.

The last objection to this scheme is that of the existing personnel of regiments and battalions selected for the Frontier Force. Many men might contend that they wanted a wider field and would be dissatisfied if restricted to what they would call a narrower rôle. That could be solved by giving serving officers and N. C. Os. the

choice of transfer into other units. This should present no difficulty, since equally in other units selected for the modernised field army, there would be many who would prefer the frontier rôle. For the men no such choice would be necessary—with the present short service system, they would hardly be affected.

Conclusion :—

In the first part of this essay it was suggested that the Army in India and more particularly the Indian Army had reached the parting of the ways which progress inevitably forces upon any art or trade. When that parting is reached, the only resource is a division of the art or trade into branches, *i.e.*, specialisation. It was suggested that for the Army in India this might take the form of a specialised Frontier Force whose existence would leave the rest of the Army free to organise and train for the civilised or semi-civilised theatres of war where mechanisation has already or may soon become a necessity. It remained to be seen whether such a specialised force was a practical proposition and the second part of the essay puts forward a concrete scheme to that end.

It is naturally not a perfect scheme—no scheme ever is—all schemes require many brains and some time to approach even the most relative perfection. But I claim for the proposal that it is a workable scheme with certain definite merits :—

- (a) It hardly depletes at all our already depleted resources available for Field Army and Internal Security duties.
- (b) It utilises existing formations and organisations. In some eyes this may be a defect. But it is never possible and generally undesirable to make a clean sweep of all that has gone before.
- (c) It could be brought into being almost at once with the minimum of expense and dislocation of our present organisation.

I have not suggested any alterations in our present system of training for our rôle on the North-West Frontier. In itself this is sound enough but vitiated by the fact of our trying simultaneously to train for Flanders, and we are not Joshua to make the sun stand still. Nor have I touched on the details of unit organisation and equipment. These would inevitably change to some extent; they would change for the better very quickly in a force that no longer had to try to fit itself simultaneously for two incompatible rôles.

Remains the governing factor. Would such a change as is here proposed give us really mobile forces and enable us to carry out the military rôle in the North-West Frontier better than does our present system? The old school 'Piffer' would answer 'Yes' emphatically. We others who are not 'Piffers,' might for the sake of our own units, who also have 'done their bit' on the frontier, feel bound to argue with him. Is there any analogous question whose answer might give us an indication to the correct solution of this problem. I suggest one. The human appendix is often quiet; sometimes however it blows up and the owner is thereupon prevented from attending to his business and interests. The North-West Frontier is not unlike an appendix. It is liable to blow up as it did in 1919 and 1930. When it does so the Army in India is generally extremely hindered in its wider business and aims.

Regarding your own appendix would you rather have it operated on by a surgical specialist or by a general practitioner? I suggest that a consideration of the reasonable answer to that question is the clue to the answer to this problem.

Is soldiering less of an art than medicine? Has it stood still while medicine has progressed? It would be ideal for every doctor to be both surgical and medical specialist. It would be ideal for every army to be fully efficient for every type and theatre of war. But are either practical ideals? If not, then our present policy is breaking the sensible maxim which I have chosen for my motto? '*The best is often the enemy of the good.*' We should surely do far better to cease to pursue an unattainable "Best" and concentrate on an entirely practicable and attainable "Good", on a specialisation of rôles that should render the Covering Force and the Field Army of India each a really efficient force for the work it has, or may have, to do.

(Omitting Baluchistan as suitable training ground for a modernised field army. Zhob to be connected to Waziristan. In order to provide required peace station accommodation and also for historical and sentimental reasons
Abbottabad (3 Gurkha Bns.) to be given to Frontier Force.)

District.	Frontier Brigade Area.	Indian and Gurkha Bns. in 'peace' stations.	Indian and Gurkha battalions in out-posts.	Attached British Infantry.	Frontier Force Cavalry.	Mountain Brigades Indian F. F. 3-7 Hows.	Attd. British Light Bty.	R. E. Field Coys.	
PESHAWAR AREA.	Nowshera ..	2 (Nowshera) 1 (Mardan)	..	Br. Inf. Bn. (Nowshera)	1 Regt. (Mardan)	BDE.		Peace Stn.	Outposts.
	Khyber ..	..	2 (Landi Kotal) 1 (Shagai)	Br. Inf. Bn. (Landi Kotal)	..	1st H. Q. Bde. 1 Bty. (Nowshera) 1 Bty. (Landi Kotal).	1 Bty. (Nowshera).	1 (Nowshera)	..
	Peshawar Outposts.	1 (Peshawar) ..	1 (Khajuri Plain) 1 (Jamrud)	Br. Inf. Bn. (Peshawar)	1 Regt. (Peshawar).	1 Bty. (Peshawar)	..	1 (Peshawar)	..
	Peshawar ..	3 (Peshawar)	..	..	..	..	..	..	..
	Abbottabad	3 (Abbottabad)	..	..	..	2nd Bde H. Q. 3 Bties. (Abbottabad).			
			1 unbrigaded Bn. in Malakand under Nowshera. 1 unbrigaded Bn. in Chitral under D. H. Q.						
KOHAT AREA.	5 Bdes. ..	Total 10 Bns.	Total 7 Bns.	Total 3 Bns.	2 Regts.	6 Bties. ..	1 Bty.	2 Coys.	..
	Kohat Outposts.	1 (Kohat)	1 (Hangu) 1 (Thall)	..	1 Regt. (Kohat)	3rd Bde. H. Q. 2 Bties. (Kohat) 1 Bty. (Thall)	..	1 (Kohat)	..
	Kohat ..	3 (Kohat)	..	..	..	..	..	..	..
	Total 2 Bdes.	Total 4 Bns.	Total 2 Bns.	..	1 Regt.	..	..	1 Coy.	..
WAZIRISTAN-ZHOB AREA.	Bannu ..	2 (Bannu)	1 (Mir Ali)	..	1 Regt. (Bannu)	4th Bde H. Q. 2 Bties (Razmak)			
	Razmak West	..	3 (Razmak)	..	..		1 Bty (Razmak)	..	1 (Razmak.)
	Razmak East	..	2 (Razmak)	Br. Inf. Bn. (Razmak).					
	Wana ..	..	3 (Wana)	..	..	1 Bty. (Wana)	..	..	1 (Wana)
	Zhob ..	3 (Sandeman)	..	..	1 Regt. (Loralai or Sandeman).	un- brigad- ed. 1 Bty. (Sandeman).	..	..	..
			1 unbrigaded Bn. Loralai attd. 11th Bde.						
GRAND TOTAL	Total 5 Bdes.	Total 5 Bns.	Total 10 Bns.		2 Regts.				2 Coys.
	12 Bdes. ..	19 Bns.	19 Bns. (incl. 3 unbrigaded).	4 Br. Inf. Bns.	5 Regts.	Peace Stn. 8 Outposts 5 13 Bties. (incl. 1 unbrigaded).	2 Br. Light Bties.	3	2 5 Fd. Coys.
			38 Bns.						

Note.—
One Cav. Regt.
added from F.
A. to existing
covering force.

Note.—
One Mtn. Bty. added
to existing cover-
ing force to com-
plete brigade in
Kohat.
Field and Post Ar-
tillery omitted.

TABLE B. I.
Frontier Force Biennial Reliefs, 1935-6.
Infantry.

Bde. H.Q.	From	To	Units.	From	To	REMARKS.
1st	Nowshera.	Khyber	1st Sind R. 1st Punjab 4th L. I.	Nowshera. Mardan. Nowshera.	Landi Kotal Landi Kotal Shagai	
2nd	Khyber	Nowshera	4th Multan 4th Punjab R. 2nd Sind R.	Shagai Landi Kotal Landi Kotal	Nowshera Mardan Nowshera	
3rd	Peshawar Outposts	Bannu	4th Punjab 5th Jhelum 2nd Punjab	Peshawar Khajuri Jamrud	Mir Ali Bannu Bannu	
4th	Peshawar	Razmak West	5th Sind R. 2nd Multan 3rd Jhelum	Peshawar Peshawar Peshawar	Razmak Razmak Razmak	
5th	Abbottabad	Razmak East	1/12 Gurkhas 1/14 Gurkhas 2/11 Gurkhas	Abbottabad Abbottabad Abbottabad	Razmak Razmak Chitral	2/11 become unbrigaded.
6th	Kohat Outposts	Kohat	2nd Jhelum 3rd Punjab R. 5th L. I. 1st L. Inf.	Kohat Thall Loralai Hangu	Loralai Kohat Kohat	2nd Jhelum becomes unbrigaded. To join 6th Brigade.
7th	Kohat	Peshawar Outposts	5th Punjab 5th Multan 4th Jhelum 1st Punjab R.	Kohat Malakand Kohat Kohat	Jamrud Peshawar Khajuri Malakand	To join 7th Brigade 1st Punjab R. becomes unbrigaded
8th	Bannu	Kohat Outposts	1st Jhelum 3rd L. I. 2nd Punjab R.	Mir Ali Bannu Bannu	Kohat Hangu Thall	
9th	Razmak West	Peshawar	5th Punjab R. 2nd L. I. 4th Sind R.	Razmak Razmak Razmak	Peshawar Peshawar Peshawar	
10th	Razmak East	Abbottabad	2/12 Gurkhas 2/14 Gurkhas 1/11 Gurkhas	Razmak Razmak Chitral	Abbottabad Abbottabad Abbottabad	To join 10th Brigade
11th	Wana	Zhob	1/13 Gurkhas 3rd Punjab 1st Multan	Wana Wana Wana	Sandeman Sandeman Sandewan	
12th	Zhob	Wana	2/13 Gurkhas 3rd Multan 3rd Sind R.	Sandeman Sandeman Sandeman	Wana Wana Wana	

Note.—Hypothetical composition of Frontier Force for purposes of above table only.

Regiment.	Battalions.
Jhelum Infantry ..	1st, 2nd, 3rd, 4th, 5th.
Punjabis ..	1st, 2nd, 3rd, 4th, 5th.
Light Infantry ..	1st, 2nd, 3rd, 4th, 5th.
Punjab Rifles ..	1st, 2nd, 3rd, 4th, 5th.
Sind Rifles ..	1st, 2nd, 3rd, 4th, 5th.
Multan Infantry ..	1st, 2nd, 3rd, 4th, 5th.
Gurkha Rifles ..	1/11 2/11 1/12 2/12 1/13 2/13 1/14 2/14

TABLE B. II.
Frontier Force Biennial Reliefs, 1937-8.
Infantry.

Bde. H.Q.	From	To	Units.	From	To	REMARKS.
1st	Khyber	Kohat	1st Sind R. 1st Punjab 4th L. I.	Landi Kotal Landi Kotal Shagai	Kohat Kohat Kohat	
2nd	Nowshera	Razmak East	4th Multan 4th Punjab Rifles 2nd Sind Rifles	Nowshera Mardan Nowshera	Razmak Razmak Chitral	2nd Sind R. become un- brigaded.
3rd	Bannu	Kohat Out- posts	4th Punjab 5th Jhelum 2nd Punjab	Mir Ali Bannu Bannu	Kohat Thall Hangu	
4th	Razmak West	Bannu	5th Sind R. 3rd Jhelum 2nd Multan 5th Multan	Razmak Razmak Razmak Peshawar	Bannu Bannu Peshawar Mir Ali	Change over to prevent Bn. doing 2 route peace station.
5th	Razmak East	Abbottabad	1/12 Gurkha R. 1/14 Gurkha R. 2/11 Gurkha R.	Razmak Razmak Chitral	Abbottabad Abbottabad Abbottabad	To join 5th Bde.
6th	Kohat	Khyber	3rd Punjab Rifles 1st L. I. 5th L. I.	Kohat Kohat Kohat	Landi Kotal Shagai Landi Kotal	
7th	Peshawar Outposts	Peshawar	5th Punjab 4th Jhelum 2nd Multan 5th Multan	Jamrud Khajuri Razmak Peshawar	Peshawar Peshawar Peshawar Mir Ali	See 4th Bde. Reliefs.
8th	Kohat Out- posts	Zhob	1st Jhelum 2nd Jhelum 3rd L. I. 2nd Punjab Rifles	Kohat Loralai Hangu Thall	Loralai Sandeman Sandeman Sandeman	Unbrigaded (From un- brigaded to 8th Bde.)
9th	Peshawar	Wana	5th Punjab Rifles 2nd L. I. 4th Sind Rifles	Peshawar Peshawar Peshawar	Wana Wana Wana	
10th	Abbottabad	Razmak West	2/12 Gurkha R. 2/14 Gurkha R. 1/11 Gurkha R.	Abbottabad Abbottabad Abbottabad	Razmak Razmak Razmak	
11th	Zhob	Peshawar Outposts	1/13 Gurkha R. 3rd Punjab 1st Multan 1st Punjab	Sandeman Sandeman Sandeman Malakand	Malakand Khajuri Jamrud Peshawar	(Unbrigaded) (From un- brigaded to 11th Bde.)
12th	Wana	Nowshera	2/13 Gurkha R. 3rd Multan 3rd Sind R.	Wana Wana Wana	Nowshera Nowshera Mardan.	

EVEREST, 1933.

BY LIEUT. E. C. THOMPSON, ROYAL SIGNALS.

I apologise for this article. There are others, I am sure, who are more fitted to write about last year's Mount Everest Expedition; climbers who went high and saw the things that I can only describe from hearsay. But the places and people I did see, and the little things Smijth-Windham and myself were able to do, these I shall describe, and something of what went on higher up on the mountain, which I myself did not see.

Climbing Everest is not a mountaineering expedition in the ordinary sense of the word, as it is understood in, say, the Alps. There, these things are decently conducted. You have your base—a comfortable hotel (perhaps!)—you select your peak, spend a day possibly in going up to a hut, a day on the climb, and a day or two back to your base. Everest is different. It is war, as is fitting, perhaps, where the world's highest mountain is concerned. And it entails an amount of forethought and organisation, together with a performance, which is comparable in scope and intensity, if not in magnitude of numbers, to war.

Of the preliminaries to this year's Expedition I know little. Smijth-Windham and myself only came on the scenes in March, when the party was already assembled at Darjeeling. Permission from the Tibetan Government for an expedition to enter Tibet for the purpose of visiting Mount Everest, was obtained in August 1932, and the Everest Committee—an organisation which has been in existence since the first Expedition in 1921—promptly set about the business of getting together a climbing party. As everyone knows, Mr. Hugh Rutledge (retired I. C. S.), who recently did some very fine work in the Kumaon Hills and the region of Nanda Devi, was chosen as leader. That the Committee was not mistaken in its choice the results of the Expedition show clearly enough. The leader's is not an easy job. Apart from matters of organisation, in which he is helped only to a small extent by the other members of the party—for the sole reason that the majority of them are employed in their normal walks of life until the last moment—the methods used to approach

and assault the mountain are his responsibility entirely, and some little detail forgotten early on may mean, for example, the arrival of the party at Base Camp in an unfit condition, and the failure of the attempt. Let me hasten to say that this year's failure was in no way due to any fault of the leader, but to execrable weather, as I hope to show later. The party was bursting fit, not only at Base Camp, but at Camps III and IV, a hitherto unheard and undreamt-of occurrence. In the matter of tactics, the leader has the advice of men who have been to Everest before, and of the members of the party itself. But when two men of equal and extensive mountaineering experience propound with equal reason almost diametrically opposite views, the problem is not simplified.

I shall not dwell here on the other climbers, for their names will appear as I proceed. Suffice it to say that the Medical Officers were Dr. Raymond Greene and Dr. W. McLean, and that transport was under Mr. E. O. Shebbeare, the head of the Forest Department of Bengal—who went with the 1924 Everest Expedition in the same capacity—with Mr. G. W. Wood Johnson as his second-in-command. Wood Johnson was also Transport Officer to the 1930 International Himalayan Expedition to Kanchenjunga, under Professor G. Dyrenfurth.

As I said above, Smijth-Windham and I came into the picture at the beginning of March last. That we did so at all was due to the activities of Mr. D. S. Richards at Army Headquarters, Delhi, which resulted in a request to the Signal Officer-in-Chief in India, for four wireless operators. This was commuted, fortunately for us, into two officers and two Non-Commissioned Officer operators, the first named to accompany the Expedition to Base Camp, the Non-Commissioned Officers to remain in Darjeeling and work the W/T. Station to be erected there. The Non-Commissioned Officers were L./Sgt. N. Watt, "B" Corps Signals, Rawalpindi, and Cpl. W. J. Frawley of 2nd. Cavalry Brigade Signal Troop, Sialkot. These two we met at Siliguri station, at the foot of the Darjeeling hills, on the morning of March 6th.

To anyone going that way for the first time, I would recommend at least one journey in the Darjeeling Himalayan Railway. Not more, for it takes a long time, and is more expensive than going by car. The tiny little engine plugs its way up through the forest, turning and

twisting into each of the many small gullies that seam the hillside, dashes (at a sedate 15 m. p. h.) across incredible slopes, performs a complete circle five times and thereby nearly succeeds in catching the last carriage, and is shunted four times to get helped over a bit of cliff, which despite its other activities, the little fellow is unable to climb. A stout piece of work and a great engineering feat.

Mr. Richards met us at Darjeeling station, and from that moment we never stopped for three days. The Expedition, which we thought was due to leave Darjeeling on March 15th, was actually going on March 8th, and the advance party of climbers had already left. In the meantime, the wireless gear had to be unpacked from the crates in which it left England, and the apparatus for Base Camp had to be sorted out and repacked for animal transport. Accumulators had to be given their initial charge. (Shades of the School of Signals! This was done by filling them up and charging for 48 hours, the full time at our disposal, after which we took them away without further attention!) Details of transport had to be gone into, and in this we were very grateful to Shebbeare, who collected the necessary animals for us. Arrangements had to be made for opening up communication, wavelengths fixed, and times of working. Last, but not least, food and our own personal kits had to be thought out. Had it not been for Mr. C. Wrangham Hardy, the Secretary of the Planter's Club, we would have been days late in starting. From the Club stores, at 24 hours notice, he produced enough food to last us for five months, all packed, listed, and ready to take away. In the matter of kit, we would have fared badly had it not been for Ruttledge who, with advice and actual issue of Expedition material, which he could ill afford to give away (since we were, so to speak, surplus to establishment), enabled us to rush together a sufficient supply at least to cover bare necessity.

On March 9th we moved off on the first stage, to Kalimpong, 25 miles distant. We had with us 24 mule loads of gear, including 11 loads of wireless equipment, all of which was unseen and untested. Smijth-Windham took the heavy stores by lorry *via* Silliguri and the Teesta Valley, I went on foot with the more fragile wireless apparatus, for which mule and pony transport had been arranged. Of the few days halt we made at Kalimpong I shall say little, except that we received abundant hospitality from the residents there. We were held up while transport arrangements were being made with Pangda Tsang, the Government Contractor on the Kalimpong—Lhasa Trade

Route. Owing to the tremendous drain on local transport made by the Expeditions stores—which required some 400 animals—we perforce had to wait a day or two after Ruttledge and his party had gone, but on March 15th we started off, making for the Jelap La, a pass into Tibet which, though only two miles from the Natu La, crossed by the Expedition, was approached by a shorter route, enabling us to drop down into Yatung, the first halt in Tibet, on the same day as the main party.

A word or two about those first few marches might be of interest. Jubbulpore, at the time we left, was beginning to get warm, just nicely so. The lower valleys of Sikkim were hot and close. The Jelap La was over 14,000 feet and bitterly cold. The change was sudden. In two consecutive half-marches the road climbs some 11,000 feet, leaving thick tropical forests and emerging onto bare, windswept, snow-covered uplands. From Pedong—the first halt after Kalimpong—the road lies through the south-east corner of Sikkim, crossing the Jelap La into that narrow strip of Tibet which runs south, sandwiched between Sikkim and Bhutan. From Sedonchen, about 8,000 feet we climbed on up past Lingtu, 12,613 feet, to Gnatung, and on to Kapup rest-house below the Jelap La. It was on this march that we passed out of the tropical forests, through the pine belt, and out onto the very bare windy highland that lies under the pass. In one place, where the track was sheltered, snow lay heaped across it, necessitating a little careful walking, but otherwise we had no difficulties.

It may be interesting to note that this—the Kalimpong-Lhasa Trade Route as it is now—was the route used by the main body of the Younghusband Mission to Lhasa in 1904. The road was engineered by the Sappers and Miners, but, judging by its present condition, has not been touched since. Indeed, one must watch one's every step, or risk a fall or a twisted ankle on the boulders that form the foundation—and now, the only remains—of the track. The descent to Yatung, from the Jelap, is very steep going for the first 2,000 feet, after which it eases off somewhat. In the immediate vicinity of the pass, the country is very reminiscent of the north side of the Lowarai La, on the road to Chitral from Nowshera. There are the same steep hillsides, covered with pine forests, though lacking the luxuriance of Kashmir. For this is a harder country than Kashmir, apart from being twice the height, and the winter is far more

rigorous. On the day we crossed, in the middle of March, the string of prayer flags marking the highest point of the Jelap was covered in ice, and, blowing about in the wind, gave out a tinkling sound. Not a place at which to linger, particularly as the low clouds cut off all the view.

As mentioned earlier, Smijth-Windham and I caught up Ruttledge's party at Yatung. We spent a day there looking over and re-organising our stores, which, despite the rough passage over the pass, had suffered little damage. The point is perhaps worth bringing out that our transport, owing to the nature of things, was not run on the same smooth lines as the pack transport of the I.A.S.C., where every third animal is personally conducted by a drabi. With us, one man might be in charge of as many as twenty animals, which he would propel along the road by means of clicking noises, shouts, and well directed stones. It will be seen, then, that an idle beast in front may cause a considerable amount of bumping and boring behind. Not that this would do any harm to the bales of wool which these animals normally carry, but with our wireless apparatus, the majority of it done up in three-ply cases (!), the situation was slightly different, a thing which we found great difficulty in impressing upon the minds of the muleteers, who, when unloading, would drop a wireless set on to the ground from three feet or so with the same carefree air as they would a bale of wool! In fact, every unloading required close personal supervision.

On the afternoon of our rest day at Yatung, a three-a-side polo match was organised. Ruttledge, Birnie, Boustead, Wood Johnson, Smijth-Wandham and myself being the players. Our mounts were Bhutia ponies, weapons—two cut down polo sticks and four hockey sticks. The polo sticks had the advantage, more especially when wielded by one like Birnie, of Sam Browne's Cavalry, or by Ruttledge. Constant shuffling of the sides produced a fairly even game, which was completely innocent of anything like organised chukkers. Boustead's pony most determinedly bucked him off early on in the game, otherwise no one came to any harm, which was really quite remarkable.

During our stay at Yatung, the party was most hospitably entertained by the British Trade Agent, Captain A. A. Russell, M.C., who resides partly at Yatung, partly at Gyantse, during the year. Later, at Phari, he overtook us on one of his periodical visits to Gyantse.

At Gautsa, the next halt from Yatung, we met the advanced party, consisting of Crawford, Brocklebank, McLean, Wager, Longland, Shipton and Wyn-Harris. For some reason or other, they thought fit to greet Rutledge and his party with a very spirited rendering of "The Red Flag", possibly a result of Crawford's recent travels in Russia; while he himself, when I first saw him, strongly resembled one of Bolshevik tendencies, being clad in a red shirt, with straggling hair, a cheroot, and an already very respectable growth of red stubble.

By the end of the next march, Phari, we had left civilisation, trees, and a green countryside behind. I have dwelt rather on these early marches because they were the beginning of it all, while we were settling down to the routine of daily marches, and because in those early days we passed through a variety of country which naturally impressed itself on one's mind. Halfway between Gautsa and Phari we came out onto the Tibetan plateau, a land largely devoid of cultivation, and for eight months in the year swept by a merciless wind, and it was through this type of country that the rest of the march lay. A land of stones and grit and flying dust, which to the casual observer has not sufficient grazing to support even one animal. Grass—at that time of the year—is practically non-existent. Six marches from Phari we saw a few trees, stunted willows, and at isolated villages later on, a few here and there. I believe Gyantse and Lhasa are in comparatively fertile regions, but the part we traversed was incredibly barren. And yet, on most marches, we would come across large flocks of sheep and goats, all apparently consuming grit in large quantities and with great zest, and looking extremely fat and well-to-do. Of animal life, we saw little. Some members of the party, on the march to Kampadzong, reported having seen gazelle and kyang (wild ass), and one day Wood Johnson and I thought we saw some *Ovis Ammon*, but they were rather too far away for certain identification. Tibetan hare we saw, and all along the march pika holes were seen—and avoided, if possible, for a pony would come down, or stumble badly, on dropping a foot into one. At Dotag, about six miles from Gautsa, we saw a herd of burrhel in the snow, above a very beautiful frozen waterfall. We were told to look out for these, for every Expedition passing that way has seen them in the same place.

I have mentioned the wind in several places, also because it impressed itself on our minds. This north-west wind is characteristic

of Tibet. It blows all the year round, with great force, except during the monsoon, and, as will be seen later, has a very marked effect on Everest and on parties trying to climb the mountain. I cannot remember a single day on which we did not have to endure the wind, and more often than not, we were caught on the march. I don't think I exaggerate when I say that its normal velocity was about 40—50 m. p. h., and, carrying, as it does, clouds of dust along with it, it makes marching most unpleasant, particularly as one's breath is always rather short during the early stages of acclimatisation. This wind always got up about 10 or 11 o'clock in the morning, sometimes earlier, and blew without intermission until after dark. Without it, life was very pleasant, for there was always a warm sun, but once in camp a sleeping bag was the only means of escape from it.

On March 29th we arrived at Kampa, roughly half of the 300 miles march completed. Unlike previous Expeditions, every member of the party was fit, despite weather conditions which, according to Shebbeare, who was on the 1924 Expedition, and Crawford, who went in 1922, were harder than any met with before. Temperatures were lower—at Shebra Shubra, eight miles from Phari, the minimum temperature recorded was minus four degrees Fahrenheit—for we were marching roughly a fortnight earlier than previous parties have done. The dust, which should have given us sore throats, for some reason failed to do so this year, probably owing to Raymond Greene, who issued fearsome gargles and nasal douches all round.

It was at Kampa, from the hill behind the camp, that we got our first view of Everest, 100 miles or more away. The whole southern horizon was a continuous line of immense snow and ice mountains, separated by big glaciers, including five of the world's highest peaks—Everest, 29,142 feet; Kanchenjunga, 28,146 feet; Lhotse, the south peak of Everest, 27,890 feet; Makalu, 27,790 feet; and Cho Oyu 26,750 feet. Round Kanchenjunga could be seen a wealth of peaks mentioned by Smythe in his account of the 1930 Expedition to Kanchenjunga. To the south-east, the three big peaks at the head of the Teesta Valley, Pauhunri, Chomiomo and Kanchenjau, all over 22,000 feet, which Dr. A. M. Kellas was the first to climb. Westwards, Everest, with its surrounding giants. Looking at Everest through the telescope, we saw that what to the naked eye resembled nothing so much as a huge white handkerchief suspended in the sky, was in reality a snow and ice face seamed with avalanche tracks. Some

4,000—5,000 feet of the upper part of the mountain could be seen and, behind, a fleck of sunlight touched the ridge leading down to North Col. A magnificent sight, and one to be remembered.

Before leaving Kampa, some members of the party visited Kellas' grave. It may perhaps be recollected that he was the doctor to the first Expedition in 1921, but died of heart failure while being carried on a stretcher over the pass above Kampa. Just prior to the start of that Expedition, he had been doing a great deal of climbing in Sikkim, in addition to spending the winter high up the Teesta and in the Kanchenjunga group, and had not had time to recuperate before starting out again, this time for Everest. The grave was found, but the stone, on which Kellas' name and an inscription in Tibetan had been carved, was smashed. A fresh stone having been placed in position, Shebbeare, the oldest member of the party, read Psalm 121, arrangements were made to have a new inscription cut, and we left the grave, alone on that bare hillside in view of those distant peaks.

Kampa to Tengkye, Tengkye to Shekar—I will not dwell on those eight marches, but pass on to our arrival at Shekar. We saw the place first from some five miles away, a sharp pointed hill appearing over a low intervening ridge. Even then it was sufficient to attract attention, but a mile or two on and we saw it fully, in all its beauty. It has been said that those who founded and built monasteries in England selected their sites with a view to the natural beauty of the place. Fountains Abbey, for example is placed in a perfect setting. Tibet is a different country, ruder and rougher, but no less can it be said of those who first settled at Shekar that they appreciated their surroundings, and the grandeur of them. Dzong, gumpa and town combine in their setting to make one of the most beautiful places we saw on the whole march. Picture the town, a little group of whitewashed houses, the roofs black brushwood, the walls relieved of their dazzling white by splashes of red paint here and there—these, and the twisted yak tails that flutter over the houses, both anti-devil devices—set on a level piece of ground, the edge of a wide, flat valley. Immediately behind the town rises a steep, pointed, hill, for about 1,000 feet. The angle of this hill is about 50 degrees, and the summit is to all intents and purposes a point. Half way up is situated the gumpa, and from a distance it is difficult to see how the buildings manage to stick into the hillside. Right on the summit are the remains of the dzong, long since disused, and literally falling to pieces.

and dropping down the hill. That night, the night of our arrival, we saw it under a full moon. All was still, save for the occasional bark of a village dog, and far above there showed the lights of the gumpa, and there floated down to us the soft sounds of the lamas chanting the evening service. We stood outside, silent, listening, and drinking it in, until some fool started the gramophone in the Mess tent, and broke the spell.

I think this year's Expedition will remember Shekar for other reasons also. Shortly after our arrival the discovery was made that some of the stores and equipment had been rifled. An immediate check of everything was made, with the result that about £200/- worth was found to be missing, a lot of it indispensable, such as porters high altitude equipment. The local Tibetan muleteers were fastened on as guilty, and two of these, in whose charge the stolen articles had been, were handed over to the Dzongpen for treatment. The penalty for theft in Tibet is amputation of the right hand, but the man is first given a chance to confess. This "chance" takes the form of inquisition by flogging, the flogging being continued until the man does confess. As far as I could discover, there seems to be no legal limit to this flogging. In practice, I presume that, if the man continues to maintain his innocence, the Dzongpen orders the flogging to be stopped, but I fancy that in some cases he does not exercise his prerogative of mercy for days or even weeks. If one assumes the party to be guilty, and is suitably enraged at such guilt, it would be a long time before aural and ocular evidence persuaded one to change one's views. Of trial by jury, such as we know it, there is not the faintest sign.

At Shekar, as at most places on the march, we were surrounded by a very large and representative gathering of the great unwashed. Even the efforts of Policie, a Tibetan mastiff and the Expedition mascot, failed to keep them away, and Policie considered a chunk of Tibetan a great delicacy, and a staple portion of her day's food. The Tibetan washes perhaps once a year. I hope I am not libelling him, but although we did see some of them washing, the great majority of them looked as if they knew not the use of water, even as a drink. I must confess that I was not the only one of our party who joined their ranks—in the spirit. The climate of Tibet is such that, apart from the unpleasantness of the deed, washing becomes a positive risk. With temperatures like those we experienced, and the wind, one washed as little as possible, and as quickly as possible. Some members of the

Expedition went as long as seven weeks without so much as washing their hands—and enjoyed it. I use to choose my day with care and have a bath once in three weeks if possible, but then, I was in the comparatively salubrious climate of Base Camp for most of the time. The Tibetan countrymen, who, for some reason connected with national custom in dress, exposes large portions of flesh to the elements, covers these exposed parts with grease, oil or ghee. But he then spoils the effect by living in a smoke-laden atmosphere and a very small hut, so that after a while he becomes covered with a layer of mixed grease and soot. That just stays there.

And so we started out on the last lap, five marches to Base Camp. There was an air of expectancy about the party now. A glimpse of the mountain from the Shekar dzong showed it to be besieged by heavy clouds. Was the weather going to be bad? Would we suffer the blizzards which proved such a set-back to the 1924 Expedition? What was the mountain really like, that last 2,000 feet, when seen at close quarters? Smijth-Windham and myself were no less concerned in the answers to these questions, although we were climbers in no sense of the word. For us, too, there was a very big question. Our wireless gear—what was it like, and was it going to meet the requirements of the case? We were about to make a very big assumption in erecting a wireless station in the very heart of the Himalaya. For all we knew, we might never hear a sound of the Darjeeling station.

It was in a state of something like excitement, then, that the party arrived at Rongbuk Monastery, one march (of five miles) from Base Camp. Thick clouds were lying low over the mountains when we got there, but in the evening everything cleared and there ahead of us, framed between the valley walls, was the goal—Everest. A big astronomical telescope—the property of the Royal Geographical Society, and specially lent to the Expedition for the purpose of observing the higher parts of the mountain from a distance—was got out, and the upper part of the North face closely studied. Arguments arose again as to the possibilities of the Second Step, Norton's Traverse, and the difficulties which might or might not be met with on the snow slope of the final pyramid. It would be of little value to enlarge on these now. I hope to show, in the continuation of this article, what actually happened. Smijth-Windham and I, gazing up the valley, were not impressed with the sight from the point of view of wireless working. It looked as though we were going to be very much shut in.

This view of Everest from Rongbuk Gompa has been described, by persons more worthy than myself, as ugly. I venture to disagree. To an artistic mind, it may lack balance and a number of other things. I have no pretensions that way, so perhaps I am not a fair judge, but although I saw the mountain, more or less from the same viewpoint, for a longer period than any other member of the party, I cannot say that I ever found it anything but magnificent to look upon, or agree that it is in the slightest bit ugly.

The first thing that strikes one about Everest at close quarters is the solidity of it. It runs up to a somewhat truncated and eccentric point from a wide base, a firm foundation. After a while, when one realises that it is still 15 miles away, the enormous scale of it impresses itself upon one. The ridge from north-east shoulder to summit is just a mile long. That face, the north face seen from Rongbuk, is some 12,000 feet high—a little less than the highest mountain in Europe—while the foot of it is already 2,000 feet higher than the summit of Mont Blanc. When we saw it first, practically the whole of the North face was clear of snow—at least of fresh snow, for there is always perennial snow lying in the Great Couloir and isolated patches out on the face of the mountain—and the yellow sandstone band, that is such a feature of this side of Everest, running clear across from north-east shoulder to north-west ridge could be seen distinctly. Above this is the black band, whose outcrop on the arête forms the Second Step. Below are fearful precipices of rock and hanging glacier. All this, and the mountains around, and the softer brown hills near the valley, form a picture indescribably grand.

On April 17th we reached Base Camp, the approach march and concentration finished, and the work about to start.

PART II.

The site chosen for the Base Camp is the same as that used by all three previous expeditions, and might be spoken of as "Base Camp on Everest" rather than as "the Base Camp of such and such an Expedition." There is only one approach to Everest, from the climber's point of view, and the position selected by the first Expedition for their Base is as nearly ideal as possible. It is the limit to which animal transport can go up the Rongbuk Valley, is not too high (16,800 feet), reasonably well sheltered, and plentifully supplied with fresh water. Food supplies are, of course, non-existent, the nearest place from which even vegetables can be obtained being some 70 miles away, though a certain amount of meat is to be had in very limited quantities from nearer at hand.

The consideration of altitude is an important matter. While it is desirable that the Base Camp should be pushed up as high as possible in order to reduce the length of the Line of communications formed subsequent to the move up the glacier, yet it must not be so high as to afford no, or only partial, relief to exhausted climbers descending from the mountain. These, as was shown this year, will often be in a very bad state, but yet, owing to lack of numbers, may be required to ascend again after a period of recuperation. It is in order to ensure this necessary recuperation that Base Camp is situated where it is, very little higher than the average altitude of the Tibetan Plateau, across which the party has marched for many days, and to the altitude of which everybody is well acclimatised; and in a place, too, where the effects of the summer—all too brief in these parts—are felt as early as possible. I was there myself, when climbers began to return after the first attempts on the mountain, and I can vouch for the effect produced on them by the sight of soft brown and purple hills, green grass (to me, all too scanty), and flowers, the warmth and returning sense of smell, after a long stay in a scentless atmosphere, amid a wilderness of ice and snow and black rock. I experienced it later, but to a lesser degree, for by then the presence of the monsoon had greatly reduced the harshness of conditions at Camp III.

The first step, after arrival at Base Camp, was to sort out the stores required for the glacier camps, and those which would form the equipment for Camps IV, V and VI on the mountain itself. For the first day or two all hands were busy on this, while Smijth-Wind-

ham and myself were erecting the wireless station. At the same time, Smythe set off up the glacier to reconnoitre the route and the position of Camp I. On his return he reported having seen something in the sky near the summit of Everest, which later on was proved to have been one of the aeroplanes of the Houston flight. There was nothing to prevent the old site of the camp being used again, and, after an interval during which various climbers made the journey up to Camp I and back accompanying relays of porters carrying loads of glacier and high altitude stores, the camp was established on April 21st.

What I have to relate now, up to the time when I went up to Camp III myself on June 11th—14th, is largely hearsay. The descriptions I shall give may be slightly inaccurate, for things were very different when I went up. I will try, however, to piece the story together partly from what I saw later, partly from accounts of those who were actually there, and partly from my experiences gained by being at the Base Camp end of the wireless link to Camp III.

The route to Camp II lies over tumbled heaps of morainic detritus resting on the surface of the East Rongbuk glacier. It is by no means difficult in that it is simply a case of slogging over a series of mounds, each one higher than the last, until Camp II is reached. The route to Camp III, on the other hand, provides a pretty problem, for here the moraine is left behind, and the route lies over rough, uneven glacier. When the first move up was made the whole was in a frozen state, which simplified movement to a certain extent, but later, with the monsoon, streams began to form in and on the glacier, and lakes suddenly appeared submerging half a mile or so of well-worn track. Crevasses, too, which at first were mere cracks easily stepped over, now widen, and their approaches become unsafe so that they may even require bridging.

All this, the first move up and establishment of glacier camps, was done in comparatively fine, though cold weather. Occasionally clouds descended on the valleys and mountains, and a blizzard would rage for some hours, but on the whole, the work went steadily on. Camp II was established on April 26th and Camp III on May 2nd. At the former a temperature of 20 degrees below zero Fahrenheit was recorded one night, and it is low temperatures such as this, coupled with the reduced oxygen content of the air, that is so wearing, and makes proper acclimatisation a thing to be achieved slowly and surely.

Even this much of the work had not been accomplished without casualties. On arrival at Base Camp, Wyn-Harris and Wager went down with mild influenza. That they recovered so quickly as to be the pair to make the first attempt on the summit is something of a miracle. Most of the climbers were suffering from a form of sore throat brought about by the cold and extreme dryness of the atmosphere. This did not prove a complete bar to progress, though one or two had to descend to Camp II from III for a few days' rest. One, Shipton, lost his voice entirely, and failed to regain it even when the sore throat had gone. His efforts to shout "Koi hai" were heart rending. The only effective cure for him was the re-ascent to Camp III, after six or seven weeks of almost complete effasia. A more serious case was that of Ondi, a veteran porter of many Himalayan Expeditions, who, on April 20th, on arrival at Camp I, suddenly collapsed with acute pneumonia. He was immediately taken back to Base Camp, where for the whole night he was kept alive by oxygen administered by the doctors, Greene and McLean. In their opinion the only thing to do was to get him away on a stretcher to a lower altitude. His condition was so acute that they had almost given up hope, and it was feared that despite a constant supply of oxygen and frequent injections of heart stimulants, he would not live another 24 hours. On the morning of the 21st, therefore, he was sent off, McLean and Crawford accompanying him, the former for the first stage only, to Rongbuk, the latter to go the whole way to the Kharta Valley. The journey was about 50 miles. The stretcher broke twice in the first five miles, and a 17,000 feet pass was crossed in a blizzard; yet, by the end of this, Ondi (contrary to all orders) was walking about when he got the chance, and rather less than three weeks after he was carried from Base Camp to all intents and purposes a corpse, he appeared there again, carrying a full load on his back, and volunteering the information that he was on his way to Camp V or VI. He returned the same day by the way he had come, very depressed about it all—evidently of the opinion that he was harshly done by. Of such stuff is the Darjeeling porter, the man who makes possible an attempt on the great Himalayan peaks, and without whose help and almost overwhelming keenness, no expedition would stand the slightest chance of success.

Meanwhile, at Base Camp, things were not going too well with the wireless station. Smijth-Windham and I commenced erecting the

station on the 18th, the day after our arrival, he getting on with the outside work, I with the indoor wiring up of the sets. Everything went quite smoothly, the whole installation was tested out on the 20th, and showed every sign of working in a perfectly normal manner. At midday on the 20th, we commenced to call up the Darjeeling station. Considering that it was well over a month since we left there, we had every right to expect that the wireless station there had been erected, tested, and was only waiting to hear our first calls. We received no reply. However, deciding that we were not giving them a sporting chance by calling up out of prearranged working hours, we closed down, and repaired to tiffin to wait for the evening watch. Still we got no reply. After another day of complete silence, we commenced furiously to think. Our apparatus appeared to be working perfectly. If the Darjeeling station was working, surely we could not fail to hear them, at a range of a mere 111 miles? Day after day went by, and still we got no answer. We called other stations, civilian and military, with a view to getting a message sent through to Darjeeling. Somewhat to our consternation, we got no reply from them, either. It was all very worrying. Was it that the high horizon clearance angle—22 degrees—on the direct line between us and Darjeeling, was cutting off our transmission? Perhaps we were in a dead spot. Eventually, this combined with the question of the clearance angle, decided us to look about for another site for the wireless station. The Camp III equipment was immediately got out and tested with the Base Camp set. Both were working perfectly, the Base Camp transmitter being "blastingly" strong. On April 27th therefore—eight days after we had started calling up—Smijth-Windham set off across the valley and up the 400 feet moraine on the far side to try to find a site in which it would be possible to hear Darjeeling. We had made an arrangement whereby, as soon as he heard the latter, he was to let me know, whereupon I would immediately set about dismantling the station with a view to moving it over in the shortest possible time. I saw him off, and watched him and Wager slowly ascending the moraine. Then I went into the operating tent, and in a despairing manner commenced to cast round again on the receiver. To my intense relief I heard the call "VUE VUE v VUD—VUE VUE v VUD"—Darjeeling calling Base Camp. As soon as the call was finished, I switched on the transmitter and replied, anxiously wondering whether I should receive a relevant reply. I listened in, and after a moment's hesitation heard

Darjeeling tell me that my signals were being received at good strength. We were through. After a few minutes' chat I told them to wait, and closed down while I went outside to signal, with a flag, the glad news to Smijth-Windham, still toiling up the moraine. He, also with a sigh of relief, returned. It transpired later that Darjeeling had experienced some trouble with their main transmitter, which was, in fact, pushing out signals far too weak for us to hear. This was only noticed when they heard our continuous calls, but failed to elicit any reply from us. The transmitter was still out of action when Mr. L. W. Ford, the owner of the amateur station VU2CS, kindly offered to allow his transmitter to be used, and it was with this that communication was primarily established. Later, the transmitter at VUD Katapahar (about three to four miles from Darjeeling) was got into working order and gave very satisfactory results.

Camp III being established and the necessary rations and stores for the high camps being collected there, the next problem was to find a way up to North Col, which is the lowest point of the ridge connecting North Peak (Changtse 24,730 feet) with the north-east shoulder of Everest. It is this ridge that affords the only practical way up the mountain. The slopes below North Col provided some 2,000 feet of crevassed ice and snow, sometimes gentle slopes, in places wicked hanging glaciers, apparently ready at any moment to hurl down tons of ice to the slopes below; avalanches capable of overwhelming porters or climbers in a moment of time, and giving them no hope of escape. The upward sides of crevasses were possibly treacherous snow slopes which, if disturbed by the passage of men above, might start to slide, wholesale, and carry men with them, to engulf them in the crevasse below. It will be remembered that this actually happened in 1922, when seven porters were killed by being swept into a crevasse. One member of our party—Crawford—had good cause to remember the accident for he was in the party on the slopes of the Col when the avalanche occurred.

Shortly, after the arrival of the party at Camp III, two reconnaissances of the ice wall were made, and on May 8th Smythe, Shipton, Longland and Greene left Camp III *en route* for the Col. Their plan was to establish a temporary camp—IIIa—at its foot (in order to obviate the necessity of making the long walk to and from Camp III every day that work had to be done), and to endeavour to make a route half way up. In this they were to be relieved by Wyn-Harris,

Wager, Birnie and Boustead. The distribution of the party at this time may be of some interest. It will be remembered that Birnie was the high camp Transport Officer, while Greene was to be the doctor at Camp IV, in addition to being one of a possible high climbing party. At Camp III were Ruttledge, Brocklebank and Wood Johnson. Shebbeare, who at this time was suffering from acute sore throat, was back at Camp II; McLean was attending a bad dysentery case at Camp I, while Crawford, having returned from the Kharta Valley, was moving up by easy stages from Base Camp, which he had left on May 3rd. Smijth-Windham and myself were at Base Camp. It will be seen therefore that there were 11 fit men at or above Camp III, a situation made possible by the slow advance up the glacier.

At this stage, before even the party was on the North Col, the weather showed signs of breaking. Already monsoon clouds could be seen welling up to the south below the Rapiu La—a low pass about a mile and a half across the glacier from Camp III—and blizzards were sweeping the mountains. Work on the North Col proceeded sometimes under a blazing sun, which was reflected in a burning glare off the snow, sometimes in a tempest of wind. Day after day the party would start out from IIIa to find all their work of the previous day obliterated, fixed ropes and pitons buried under a smooth expanse of soft fresh snow. Then would follow more tramping of the track; groping in the deep snow for a sign of a rope, and unearthing it when found; and more laborious step cutting in the hard ice.

The route selected was safe but steep. Ruttledge described it as being "up to first class Alpine standard," and what a climber can do, with difficulty, in the Alps, may be well nigh impossible at heights between 22,000 and 23,000 feet. Yet Smythe amazed the whole party by the way he cut "pillar-box" steps up 30 feet of perpendicular and partly overhanging ice. This, it might be explained, meant hanging on with one hand, while with the other he reached out above him and hacked out the next step in the ice above his head. Exhausting enough at sea level.....

At last the route was completed, fixed ropes in position and the whole made a practical way up for porters. On May 15th Camp IV was established on a little ice shelf at an altitude of about 22,800 feet, or some 200 feet below the summit of the Col. The site was a good one from the point of view of the shelter it had from the biting winds that swept over the Col, but it was in the lee of a small ice slope,

from which little falls of snow used to descend periodically on to the tents. Later on, these falls became so frequent, that it was feared that the camp was in danger of being hit by an avalanche which might overwhelm the tents. The camp was therefore moved up and over the Col, to a position which was certainly safe from avalanches, but the price paid for safety was exposure to any and every wind that blew.

At Camp IV the party was held up to a certain extent by weather, blizzards being frequent, but five days after the camp was established a party, consisting of Wyn-Harris, Birnie and Boustead with ten porters, set off in an attempt to establish Camp V. The day started fine but rapidly deteriorated and at a height of some 1,000 to 1,500 feet above Camp IV, the gale was blowing with such force and the cold so intense that Birnie, who was in charge of the porters, decided that for their sakes it was inadvisable to continue upwards. Loads were therefore dumped and the Party returned to North Col. For another day they were confined to their tents, but the following day, May 22nd, was fine, and Wyn-Harris, Greene, Birnie, and Boustead again set off up the mountain, Wager and Longland accompanying them for a training walk. Again a terrible wind raged but this time there was no stopping. The abandoned loads of two days before were picked up and Camp V was established at 25,700 feet. Greene, who was not fully acclimatised, became exhausted on the way up, though he temporarily revived himself with some oxygen found at Finch's camp of 1922, and his condition was so serious that he was forced to turn back, arriving at North Col with a three-inch dilation of the heart. Wager took his place in the climbing party, he and Wyn-Harris remaining in the tiny tent at Camp V, to attempt with eight picked porters, who also stayed, to establish Camp VI the following day. That night was windy and the next morning so bitterly cold, that they decided against any further move up that day. They put out a signal on the rocks to indicate to those below that they were staying, and retired, numbed, to the tent. The whole operation of putting out the signal took them not more than five minutes, yet it was three hours before their blood circulation was restored, and feeling returned to their frozen limbs. About 4 p.m., Smythe and Shipton, who apparently had not seen the signal, arrived at Camp V, whereupon Wyn-Harris and Wager decided that, owing to the congestion in the tent, it would be better for Smythe and Shipton to replace them in the climbing party, and returned to North Col. May

24th was again too windy to allow of any move towards Camp VI, and owing to the inevitable shortage of rations, which had never been calculated for a prolonged stay at Camp V, Smythe and his companion decided, on May 25th to evacuate and descend to North Col.

For several days now work above the Col was impossible, and the climbers were busy moving Camp IV to the crest of the Col. Rutledge, Greene, Crawford, Brocklebank and Boustead returned to Camp III, escorting thither a number of porters whose frost-bitten hands necessitated their being helped on the steep portions of the descent. Smythe, Shipton, Wyn-Harris, Wager, Longland and Birnie were now left at Camp IV, and on May 28th a party again set out for Camp V. This was reached in safety, and the following day being passably fine, Wyn-Harris, Wager and Longland, with eight "Tigers," went on and established Camp VI at a height of 27,400 feet—surely the greatest carry ever made by Himalayan porters. Longland, in a magnificent piece of mountaineering, conducted the porters down to North Col that evening, most of the journey being done in thick clouds, a blizzard, and a terrific wind, on a slope on which one slip would be fatal. I believe that when the party arrived at Camp IV, each man's left side was covered in ice. Beards were completely concealed by ice, and goggles had been of little use since leaving Camp V. Longland's performance ranks perhaps as one of the greatest things that has ever been done on Everest.

Then began the first attempt on the summit. Down below, all was confidence that the mountain would be conquered at last. The men were so fit; Camp VI had been placed so high, and the summit seemed so near. Surely they could not fail? Wyn-Harris and Wager left their tent at Camp VI at about 5-30 a.m. on May 30th. At 7-0 a.m. they were seen by Longland from Camp IV, "going strong." Then clouds descended, and from that moment, for 36 hours, they passed from the ken of those anxiously waiting for news below. As time went on, and no news came through, Longland's last message about them took on an ominous savour—it sounded too much like Odell's report of Mallory and Irvine in 1924.

Smythe and Shipton went up to Camp VI. They too vanished for the time being. Back at Base Camp, I kept on asking Smijth-Windham for news. Greene, Wood Johnson and I were in agonies of suspense. Telephone calls from Camp III elicited no response, and

thick clouds wrapped the mountain in mystery. At last Smijth-Windham began to transmit a communiqué to me, and while I read it out aloud Greene decoded it. I reproduce it in full:—

“Phone message from Camp IV at 1,725 states Wyn-Harris Wager returned without injury after night Camp V. Left Camp VI yesterday soon after dawn finding between camp and first step on ridge ice-axe supposed Mallory’s. Following yellow sandstone band crossed great couloir to about same point as Norton. New snow on slabs. 1,230 realised not time to reach summit and decided further recce second step in order assist second party. Found south of step very smooth difficult snow slope. Returned Camp V. Meanwhile Smythe Shipton arrived Camp VI. To-day will examine second step and proceed if possible. If impossible, will sleep again Camp VI and attempt summit to-morrow. Owing clouds no news of them to-day.”

The finding of the ice-axe is an interesting point, and has been the subject of considerable controversy. It is now generally admitted that it is not the one dropped by Somervell in 1924. Indeed, there are several very conclusive arguments against this theory. Either Mallory or Irvine, probably the former, owned the axe, and the spot where it was found by Wyn-Harris is almost certainly that at which the accident occurred which cost Mallory and Irvine their lives. Grating of nailed boots betokening a slip of the man on the rope behind; a hasty putting down of the axe to have both hands free to hold the rope; a jerk, and the beginning of that awful slide which could only finish some 10,000 feet below on the main Rongbuk Glacier. It might happen at any time to a tired man, and once the slide has started, there is no recovery.

A short analysis of the communiqué which I have quoted may be of interest. Wyn-Harris’ and Wager’s primary object was reconnaissance of the mountain above Camp VI, with a view to finding a practicable route up. If they found such a way, and if time and their physical condition permitted, they were to have a try for the summit. Wyn-Harris, describing the climb, said that as they approached the second step, it took on more and more the appearance of the bows of a great liner, towering some 300 feet above them; while below, and on the North side, there appeared to be an easy, wide, level pathway. Small wonder that they took the latter way, without a further glance at the step. The “garden path,” though I do not think they

knew it at the time, was the beginning of Norton's traverse, and very rapidly lost its smoothness and levelness, as it ran out across the North face of the mountain, to merge into the general slope. Progress along it was necessarily slow, the fresh powder snow making it exceedingly difficult to find footholds, or to be sure of them when found. A nerve wracking performance. Arrived at the point where the direct horizontal traverse ceased, and the upward climb was to begin, reluctantly they had to decide that the summit was out of the question. There were left now some 1,100 feet of steep climbing to be done, over slippery rock and loose snow, and to make the summit and return in safety to Camp VI, before dark, was an obvious impossibility. The direct climb up the wall of the second step was, in their tired condition, too much for them even to attempt, possible though it may or may not have been to a fit man. From the descriptions of the various men who have seen the second step, it seems more than probable that it is never likely to be the route to the summit. A climb of 300 feet at that altitude—however fit a man may be—can only be achieved if there are "arm-chair" foot and handholds. Any sort of climbing which entails heavy muscular exertion of the arms and legs will rapidly prove too exhausting, and might even result in a collapse from heart failure.

Wyn-Harris and Wager, on their way down, stopped at Camp VI for a few moments, to pass on the results of their reconnaissance to Smythe and Shipton who had that day ascended from Camp V. On the morning of June 1st, after two nights and a windy day confined to the tent, the latter pair started out on their attempt on the summit. It would be tedious repetition to recount this climb in detail. Smythe's own story of it has been published both at Home and in India, and one can only marvel at his very gallant lone effort after Shipton's return to Camp VI. It might be pointed out that orders were very clear cut on the subject of false heroics on the mountain. No man, if he felt unfit, was to carry on to the point of collapse, for in so doing he would endanger not only his own chances of safe return to camp, but also those of his fellow-climber. Shipton realised early that owing to internal trouble he would not be able to go on any further, and Smythe, after reassuring himself that Shipton was in a fit condition to return alone, continued the upward climb. His was such an intimate experience that day that I can only refer the reader to the official account of the Expedition and to Smythe's own story.

And so the second assault party had failed and descended to Camp III. Here a conference was held, and the state of affairs examined. There was much snow on the mountain, and it looked as though more would be deposited, making conditions even more difficult than they had been so far. The monsoon was well established in the Everest region. It is barely conceivable that an attempt might have been made had there been enough fit men for the job. The state of the party was however the deciding factor. Not one of those who had been high but was suffering from a dilated heart, to a greater or less degree, and many had frostbite, and there were not sufficient fit men to make even one assault and support party. The doctors were, however, of the opinion that a rest at Base Camp was essential, and this decided Ruttledge to withdraw from Camp III, though the climbers were already arguing over plans for another attack, and asserting their own claims to physical fitness. However, it was a weary and battered party that began the descent to base on June 4th.

A week or more was spent in what Ruttledge described as "the Capuan delights" of Base Camp. I agreed with the description to a certain extent, but then, I am biassed. I had not yet been up the glacier. It was pleasant, though. The days were warm, to the extent of being hot at times. Smijth-Windham and I had recently received a fresh consignment of food, which was eagerly pounced upon to relieve the monotony of the Expedition's rations. There was some Irish Whisky which proved very drinkable when taken neat—some bottles of rum, too.

Raymond Greene and I, in our spare time efforts to beautify the home, had supervised the damming up of the stream which runs from the spring in the camp, and had succeeded in making a very sizeable pool, in which we proposed to bathe. We did, too, he and Longland and I. Greene, hardened no doubt by similar experiences in the Kamet Expedition, was wont to take a regular morning bath in it, ice or no ice. Longland and I preferred a rapid dive through the three feet of water, followed by five minutes' intensive effort to regain one's breath after climbing out. The first time I bathed the temperature was 35 deg. F.; the second time it was one degree lower. I only bathed twice. But it was a world's record, we think, bathing at 16,800 feet and enjoying it too, really.

At this time, there was much discussion as to what was to be the next move. No one yet had been on the mountain during the

height of the monsoon. No one knew what effect a break in the monsoon would have on the mountain. And no one was in the least bit in favour of leaving without making another attack on Everest. At last the doctors pronounced sufficient men fit to make a skeleton party to go up again, and on June 11th, Crawford and Brocklebank started up for Camp I, followed by Rutledge, Smythe, Shipton, Wyn-Harris and Longland on June 13th. I accompanied the first named pair, in order to reopen the wireless station at Camp III, leaving Smijth-Windham to carry on at Base Camp.

The walk from Camp I to II was perhaps one of the hardest I have ever done. The rise is only about 1,500 feet and the distance five miles—not much, one would say. But for some reason or other, I was off my feed that morning, and could only eat a very small breakfast, the comfortable feeling of which had worn almost before I had done a mile, and I completed the rest of the march on an empty stomach. The early part of the walk, as I think I have said before, is nothing more than a drudgery of climbing up and down piles of morainic material, but always going up. The scenery, too, was monotonous to begin with, but towards Camp II I began to get a view of the ice seracs—isolated towers of ice—where the glacier was not covered by morainic material. They stand up, some of them, 80 or 90 feet, and, when I saw them, glistening white, a striking contrast to the dark brown and black of the rocks and mountain sides. The sight of them, protruding over a near ridge of the moraine, persisted in my mind as an impression of a line of stately sailing ships, sails set. At times I was half expecting them to move. Some of them showed large cracks, in the depths of which I could see clear ice of the purest blue in colour.

On either side now were great glaciers coming down as tributaries into the East Rongbuk. It is remarkable how some of them stick to the mountainside at all, so steep are the slopes. In the distance, on the next day's march, I could see the open glacier leading to Camp III, but by then I was not in a very appreciative mood. Every step was an intense effort, and the way was still steep. I was, of course, unacclimatised, the altitude now being in the region of 19,500 feet, and in order to get a bit more used to it, I rested a day at Camp II, while Crawford and Brocklebank—to whom, of course, this ascent was in the nature of a picnic—went on to Camp III. Immediately in front of the Camp II is an icy lake, formed by the damming up of a

small stream by the snout of a big glacier. This latter comes down from a 25,000 feet peak which is quite close to Everest itself, and its snout is very much broken up into enormous ice towers. In the early morning, one could hear cracking going on, and when I came down again, I noticed that one of the towers had collapsed into the lake.

When I arrived at Camp III on June 14th, after a walk nearly as exhausting as that to Camp II, and a bad go of "glacier lassitude" I found Crawford and Brocklebank in their sleeping bags, though I had expected them to go on to Camp IIIa that day. The weather, however, was bad. Snow had fallen the previous day, and was falling when I arrived, and in addition, the roar of avalanches could be heard from the direction of the Col.

They left next day, for IIIa, but returned the day after that with the news that they had tried the Col on the previous afternoon, and found that it was some five feet deep in powder snow, and quite impassable. Not only was it unsafe, but even had a party forced its way up to Camp IV, it was by no means certain that any advance from there could be made, for the party would have to halt there at least until the higher parts of the mountain were reasonably clear of snow.

So we all sat down to wait. Every morning there was brilliant sunshine, which took some of the snow off the mountain, and every evening there was a snow storm of varying intensity, which put back all the whiteness that had come off during the morning. And there was hardly any wind. A state of affairs had been reached whereby the N. W. wind of Tibet was balanced by the monsoon winds from the south, and Everest lay bathed in sunshine, but looking no blacker. When we first arrived at Base Camp, we had noticed that even several days' snowfall would be cleared off the mountain in a comparatively few hours with the N. W. wind blowing its hardest. Now, however, there was no wind, and the sun, hot though it was, made little or no difference, though the eye of hope thought it saw otherwise. It seems that the only clearing agent, at such high altitudes as the upper parts of Everest, is wind. The air temperature is so low that, except in sheltered spots, snow can remain in full sunlight without any tendency to melting or sublimation, at all events, not sufficient for our purposes. Then one day there started a blizzard, which continued for 18 hours, by the end of which, when the clouds cleared, it was evident that we had had our break in the monsoon, for the mountain was once more white as a sheet. That settled it. At Rutledge's

request I wirelessed Base Camp to order transport for the return journey, and the evacuation of the glacier camps started on June 21st.

Wyn-Harris, Longland and myself were the last to leave Camp III. On the morning of our departure, we crossed the glacier to the Rapiu La. From here we had a glorious view of Makalu and Chomolongo, rising out of a sea of monsoon clouds, though the distant view of Kangchenjunga was hidden. Still more magnificent, though, and awe inspiring, was the sight to the south-west, which included Lhotse and most of the south-east face of Everest. Words fail me to describe its size and appalling grandeur. From where we stood, we must have been looking at at least 8,000 feet and more of steep, ice-covered and avalanche-scarred slope. One shuddered to think of anyone attempting to climb this side of the mountain, though this was one of the points that the 1921 Expedition considered—and settled, once and for all. Even so, Wyn-Harris and Longland were busy devising a possible route up a dizzy looking ice ridge, that was more a series of connected ice pinnacles than a continuous ridge. It reminded me of the descriptions and photographs of the routes attempted by the Bavarians on Kangchenjunga.

It was very pleasant sitting there in the sun, watching the ever changing cloud effects on the mountains around us. Everest was being assailed continuously by swirling masses, which would beat up against the south-east face, be pressed upwards, and then hurled back as they met a faint breath of the N. W. wind over the ridge. There were dazzling white, billowy clouds, hurrying mists, and over all, silence. Not a sound came up to us from below the pass, we might have been the only living things in all the mountains—except for a flock of Tibetan snow tits struggling to make the height of the pass, and even they were too tired to make their usual friendly chirping. Wyn-Harris remarked that they must be unacclimatised. One could have sat there for hours, drinking in the scene, and it was with a sigh of regret that we turned to leave, to begin the long, weary plod down to Camp II.

That night, the spirits that inhabit the mountains must have been astonished, for after dinner we sat long in the tent, singing, and the next day we marched into Base Camp to the tune of "The Volga Boatmen." Has anyone before ever had enough breath in his lungs to spare for singing on Everest?

We, too, were astonished to find that at Base Camp the main topic of conversation was the formation of another Expedition to Everest. Instead of wanting to see the last of the mountain, they were wondering when they could get back to have another shot at it. There were also discussions as to whether it would be feasible for the main body to move down to the Kharta Valley for a month or two, in the hopes of being able to recuperate sufficiently for a post-monsoon attempt; and there were some who were enthusiastic supporters of a scheme in which two men were to be left at Base Camp to form a meteorological station, for the purposes of obtaining accurate data as to conditions on the mountain during the latter part of the monsoon.

Discussions were brought to an abrupt conclusion by the arrival, by wireless, of a cablegram from the Everest Committee, ordering the immediate withdrawal of the whole party. Funds would not permit of a protracted stay in Tibet. July 1st was a "memorable day" for Smijth-Windham and myself. For five hours without a break we kept the Darjeeling station busy reading our messages, which included a press-cablegram, in cipher, of just under 700 groups. The following day we closed down—Base Camp and the wireless station—and in a few hours the station was reduced from its complete working state to a collection of full packing cases. Shebbeare and Wager were still up the glacier dismantling the camps and supervising the transport of stores to Base Camp, but the remainder of us left that evening for Rongbuk Monastery, the first stage on the way home.

Our return differed from the outward march in that, between Chodzong and Tengkye, we turned south for the Kharta Valley. This, from the point of view of fertility, is really an offshoot of Nepal. Northwards, in the space of a day's march, one gets into the typical, sparsely vegetated country of Tibet. South, through the Arun gorge, is the Nepal frontier, a few miles away. Some of us spent a glorious day rambling in pine forests amid long, thick grass and wild-flowers, at a modest height of 11,000 feet. At one point we caught a glimpse of Everest, up a side valley, though we never saw Makalu, which I am told is a most wonderful sight from this valley.

At Kampadzong we again struck off the route of the outward march, crossed the Sikkim frontier at the Sabo La, and dropped into the head of the Teesta Valley. From the pass we saw the magnificent view of the north face of Chomomo, some four or five miles away. This is one of the peaks climbed by Kellas in 1921, though he tackled

the southern side. Indeed, Jack Longland, with whom I was marching, gave it as his opinion that he had never seen a more completely defended and unclimable mountain face than that at which we gazed from the Sabo La.

The Teesta Valley is, I suppose, one of the wonder valleys of the world. Commencing at the Sabo La, at 17,000 feet or over, it is born in a wild mountainous land, surrounded by high peaks, no vegetation, and the young Teesta River a trickle over which one can step with ease. In 60 or 70 miles it has dropped to 1,500 feet, and is passing through steamy, tropical Bengal. In between, it is fed by innumerable tributary streams, one of the greatest of which is that which runs out of the Zemu Glacier, which drains the whole of the east side of the Kangchenjunga group, until, at the Teesta Bridge between Darjeeling and Kalimpong, it is about a hundred yards wide, and no placid stream at that, but such a torrent as no man could live in for more than a few gasping, terrifying moments. Even here it is still a mountain stream, falling rapidly, running between steep, forest-clad mountains. The thunder of its passage is awe-inspiring and ever present as one descends the valley by the forest path, now at the water's edge, now 800 to 1,000 feet above it, when the roar is hushed to a low growl, and one can make oneself heard without shouting.

As one would expect, in a valley which starts above the highest line of vegetation, and runs down to tropical heat, there is an amazing variety of tree, flower and insect life to be seen as one passes down the valley. Round about Tangu, at the 12,000 feet level, there are pine trees, rhododendrons, and soft turf. By Tsungtang the vegetation had already become sub-tropical, while at Digchu, where we left the main valley to go over to Gangtok, it is quite tropical, and the steamy heat terrific. Most of the way down we were plagued by leeches, which insinuate themselves into one's clothing despite all efforts to keep them out.

Some of the most beautiful features of the valley are the waterfalls, which for size and grandeur surpass anything I have seen elsewhere. When we saw them, the streams were all swollen by monsoon rain, and the falls were probably at their best. Many of them drop for as much as six or eight hundred feet, some of them slender, like a grey mare's tail, others sturdy columns of rushing water. One we saw fell so far that it turned to water vapour long before it reached

the bottom, and around its foot was a beautiful rainbow of colours glinting in the bright sunlight.

And so, at last, to Darjeeling and the very generous hospitality of the Planter's Club, and the end of another Everest Expedition. For the fourth time, Darjeeling welcomed a defeated party. And one wonders what will happen next time. It would be idle to speculate on chances, there are so many factors that affect the situation, factors which cannot be correctly gauged until the mountain is reached. This year the chief cause of failure was undoubtedly the early monsoon, and it would be worse than bad luck if the next expedition experienced the same weather. Given a good monsoon, with the experience gained by this year's party, there seems to be little reason to doubt that the next will be successful. It may be sickness next time. It may be the summit. Who knows?

BACTERIAL WARFARE.

BY MAJOR LEON A. FOX, M.C. U.S. ARMY MEDICAL CORPS.

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The question of bacterial warfare has been brought forward from time to time since the World War. The use of the organisms that cause communicable diseases as an instrument of warfare was considered by the Conference on the Limitation of Armaments held in Washington in 1922. An International Commission consisting of Professors Pfeiffer (Breslau), Bordet (Pasteur Institute), Madsen (Copenhagen) and Cannon (Harvard), appointed at the time, reported to the League of Nations essentially as follows :—

- (a) The effects of bacterial injury cannot be limited or localized ;
- (b) Modern water purification methods protect against the organisms of typhoid and cholera ;
- (c) Plague is a disease that would be as dangerous for the force using the organisms as for the attacked ;
- (d) The danger from typhus has been exaggerated ;
- (e) Modern sanitary methods are effective in controlling communicable diseases.

Following this pronouncement by these eminent scientists, the question of bacterial warfare suffered a lapse of interest ; but during the past year, as an incident of the preparation for the Geneva convention, there has been a marked revival of concern in this supposed bugbear, bacterial warfare. Possibly this is only a part of the effort of professional pacifists to add all the imaginary frightfulness they can picture to the known real horrors of war.

The fact that a conquered nation, possibly of superior physical development, has considered a weapon to be a cruel and brutal implement did not cause it to fall into disuse. The only thing that caused these weapons to be practically abandoned has been the development of such protection as caused these implements to cease to be effective, or because other instruments were designed of greater

range and effectiveness. These factors are the only things that have ever caused a weapon once used successfully to be abandoned.

The outcry against the use of chemicals seems to people of this day to be quite a serious matter, and some wonder whether their use will be curtailed by this influence. The following factors should be considered before we make a decision:—

- (a) No effective weapon has ever been abandoned until a more effective weapon or protection has been developed or has rendered the instrument useless.
- (b) The hue and cry that attended the introduction of chemicals is not unusual on the introduction of a new weapon. The early use of gunpowder produced a reaction in every respect similar to the cry of the present-day pacifist against gas.

Will the use of chemicals in warfare be abandoned? Probably not. Will the use of chemicals be curtailed? Certainly; as the race progresses, and as new and more effective weapons are designed; but not before this advance is made. Will the next advance in warfare see the use of biologics? Will the next agent used be the living organisms, bacterial warfare—the scourge of armies from the most ancient times, the communicable diseases?

Before attempting to answer these questions the subject of biologic warfare will be considered in more detail, because here again we encounter most elaborate and fanciful statements.

A review of military history reveals the great influence that disease has played in past wars. Results have been decisively influenced in many campaigns by epidemics of communicable disease. In some campaigns disease has caused such losses that the combat has reached a stalemate. However, in certain instances, for unknown reasons, there has been a great difference in the degree to which combatants have reacted to the epidemic conditions. In a few cases we are able to understand why the communicable diseases appeared to have greater invasive power toward one of the armies; in other instances we do not understand clearly why there was a difference in the degree of involvement of the forces.

Volumes have been written on the epidemic diseases that have attacked military forces. We will not attempt to review this extensive literature, but the doctor, especially the epidemiologist, knows

that the student of history who reads only of tactics and strategy, the victories and defeats of a campaign, without familiarity with the medical history of War, is likely to give some commander credit for success or failure that all too often has been caused by some epidemic of communicable disease. This is not meant to depreciate military success, for the great general is often a great sanitarian, and even Alexander may owe a part of his success to his doctor—philosopher—teacher, Aristotle's advice to "boil his water and bury his dung."

We can search the pages of military history down to the XXth century before finding a campaign where the missiles of the enemy produced more casualties than epidemic disease. In most of the ancient campaigns of any duration some one of the great military plagues did more to decimate the military forces than all the man-made munitions: I say "one" advisedly, although often many infections raged, and famine and scurvy accompanied the communicable diseases. What was the nature of these ancient pests? Were they diseases of that age now no longer known? No—the military pests that existed then are still with us.

The Big Six of all war-time are:—

- (1) The Enteric fevers—typhoid and the para-typhoids.
- (2) The Dysenteries.
- (3) Cholera.
- (4) Typhus.
- (5) The plague, Bubonic Plague, the Black Death.
- (6) Small-pox.

Do not consider for a moment that the above diseases had any monopoly of the right to destroy armies. It is probable that at times influenza and the epidemic pneumonias took such heavy toll that but little fuel was left to be consumed by the Big Six. Again, under conditions where malaria is endemic, this disease is second to none in the production of non-effectives in military ranks. In fact, measles and epidemic meningitis might well be added to the list of military scourges.

Nevertheless, it is not our purpose to consider the epidemic conditions of the armies of the past, but rather to consider the belief that, if these infectious agents were able to produce such frightful outbreaks of disease by the simple process of chance infection under natural

conditions, then, in the hands of man as a military weapon, they may well prove even more destructive; and to show that this opinion fails to consider the fact that the same measures that are now so efficacious against the chance infections occurring in nature may prove of equal value in combating the same agency of destruction when used by man.

We have presented biologic warfare in all its horrors; now let us analyse the problem in detail. What agents can be used to produce death and disease? How can these agents be introduced into the bodies of the enemy? We will discuss these questions in the order stated.

The biologic agents available for warfare are:—

- (1) The communicable diseases.
- (2) Other infective processes (such as wound infections).
- (3) Toxic products of bacteria.

The communicable diseases are well-known. They are the so-called transmissible diseases that produce epidemics. They are caused by a living contagion and are spread from man to man or animal to man by various channels of transmission. All of the Big Six and the other diseases mentioned above belong to this group.

The second group, the other infective processes that are available, include such infective materials as the agents that infect wounds, gas gangrene, tetanus, anthrax and other wound contaminations that are infectious but not communicable.

The last group of dangerous agents are the toxic products of bacterial growth. We will mention but a single terror—inspiring example—botulinus toxin. A portion of this toxin almost inconceivably small, when introduced into the body by any channel, is lethal.

The important question, then, is how are these agents to be introduced into the bodies of the enemy to produce casualties? In addition, any proposal for the deliberate use of pathogenic organisms as a means of warfare will have to consider the question of how to produce a destructive epidemic in the forces of an opponent and at the same time protect one's own forces from invasion by the virulent organisms in question. Certainly at the present time we know of no disease-producing micro-organisms that will respect uniform or insignia, and the use of bacteria in warfare for the destruction of opposing forces will

have to be predicated upon the successful prior immunization or the complete isolation of the forces employing the disease-producing organisms.

This investigation must therefore begin with a study of the channels of infection. The communicable diseases may be classified on the basis of their "Routes of Transmission". By this is meant the path that the living contagion follows when it leaves the body of the sick man or animal, or in some cases the carrier, to enter the body of the susceptible host to produce disease. On this basis we may classify the communicable diseases into intestinal diseases, respiratory diseases, direct contact diseases and insect-transmitted diseases.

The intestinal diseases are produced when some small portion, usually a microscopic portion, of the material from the intestinal canal of the sick man with its living micro-organism, is introduced into the alimentary canal of the susceptible individual. Typhoid, cholera and dysentery are well-known examples of this type of disease. The respiratory diseases, sometimes known as "sputa-borne" or even "air-borne" diseases, are the communicable diseases spread by the transmission of living micro-organisms from the respiratory tract of the sick to the respiratory tract of the invaded. This group of diseases is of very great importance and embraces such conditions as the common cold, influenza, pneumonia, diphtheria, epidemic meningitis, small-pox, and possibly of special importance for war purposes, the pneumonic form of bubonic plague.

The group of diseases that we refer to as "insect-transmitted" are those where the invasion of the new host is effected by the bites of insects which have previously fed on an individual—man or animal—infected with the disease in question. A period of incubation on the part of the insect between feedings on sick and feedings on individuals to be infected is necessary in certain instances; with other diseases such interval is not required. Examples of insect-transmitted diseases that require an interval for the development of the contagion within the body of the insect after feeding on the infected individual are malaria and yellow fever, both transmitted by mosquitoes.

Bubonic plague, a disease of rats that is transmitted to man by the bite of the rat flea, does not require an incubationary period for the rat flea to develop infectiveness.

The venereal diseases are direct contact diseases. They are of profound military importance and have proved decisive factors in cer-

tain past wars; notably influencing the European campaigns of the XVth and XVIth centuries. The deliberate use, however, of this means of injury is fraught with difficulties when we plan a method of securing personnel to effect the necessary exposure. The soldier's danger from the venereal diseases will not come from the openly avowed war-time enemy who loves him least, but from the money-loving or uniform-worshipping ladies who profess to love him most. Therefore, while these diseases may at times exceed all other causes of military non-effectiveness, we can dismiss them without further discussion while we are considering bacterial warfare.

It follows, then, that the communicable diseases that constitute an epidemic or pandemic threat to the military forces are the intestinal, respiratory and insect-transmitted diseases.

The Intestinal Diseases.

Mankind is all too familiar with the terrible epidemics of typhoid, cholera, dysentery and the diarrheal conditions that have destroyed military forces in the past. However, it is highly questionable if this group of diseases will ever in the future cause any such catastrophes for the reason that the epidemiology of these infections is so thoroughly understood, that modern sanitary methods and immunization processes have rendered comparatively innocuous these hazards of earlier armies.

The deliberate use in warfare of these agents, however, we shall consider. While occasional small outbreaks of these diseases may be due to food infections, real epidemics of this group of diseases are only traceable to infected water and milk supplies, or to such a complete sanitary breakdown that general fecal contamination of food supplies occurs. The possibility of contaminating a milk supply presents practically insurmountable difficulties, although it is theoretically possible that agents might use such a means to discommodate and harass civil populations. It has, of course, no practical application to the military forces themselves.

Contamination of water supplies of civilian communities by means of infection of large reservoirs and storage basins, where the water is held awaiting consumption, is a possibility. Contamination, to be effective, would have to be subsequent to treatment by the modern water purification plant consisting of filtration and chlorination, or of course it would be valueless; but this is within the range of possibil-

ities, and it is possible that future wars will reveal that agents may make an effort to contaminate municipal water supplies.

The use of the intestinal group of diseases against forces in the field would probably prove entirely ineffective, because modern water purification methods and the close supervision of the water supply that is accepted as a necessary incident of military service will absolutely preclude the successful employment of this means of combat.

However, it may be well to stress the fact that the reason modern armies, and for that matter all civilized communities, do not have serious epidemics of these diseases is not because the infective agents that cause these diseases are not present or available, but because modern sanitation protects the personnel.

Let us take a typical example, typhoid fever. The incidence of typhoid in our civil population has been greatly reduced during the present century. Let no one think, however, that this is due to any scarcity of the typhoid bacillus, while it must also be remembered that a civil population has not had any general immunization such as helps to protect an army. Typhoid has not retreated to the outskirts of civilization; it is all about us; every country is infected. Typhoid-carriers in the United States possibly number 100,000, and are generally without supervision. The reason we only have about 5,000 deaths per year in the U. S. A. instead of about 100,000 deaths from typhoid fever is because the great mass of our people now use water that has been rendered safe by filtration or chlorination. They consume milk that has been pasteurized and other foods that have been protected.

The same statement may be made concerning the low incidence of the dysenteries. The infection is present, but epidemics do not occur because our sanitary measures are effective. We need not fear any external infection with this group of diseases; we are already grossly contaminated.

The die-hards will say that cholera is not so easily handled and is not at present a problem in America. Granted. We do not have cholera in the States; but our army and our people do live in the presence of cholera without having epidemics of the disease. The Philippine Islands, where our army maintains an effective fighting force entirely free from this terrible scourge, has a carrier incidence of the vibrio, which causes cholera, that is always high.

The intestinal group of diseases will certainly not prove destructive against any civilized nation which cares to pay the price of the protection that modern sanitary methods provide.

The Respiratory Diseases.

In leaving this group of diseases we proceed from the problem that represents the greatest triumph in preventive medicine to the group of diseases that baffles the best efforts of all health workers. In the control of the intestinal diseases we have so much to be proud of; in preventing the respiratory diseases we have accomplished so little. This is stated with full knowledge of the wonderful results that have been obtained with small-pox vaccination, and the immunization to diphtheria by the use of toxin products, as well as with a full realization of the fact that we are on the threshold of equally great accomplishments in controlling scarlet fever.

It should be noted that these great accomplishments are not sanitary triumphs such as glorify our work with the intestinal group of diseases, but immunization processes. Not being able to prevent the infection reaching mankind, we take advantage of the fact that familiarity with the organism, while not breeding contempt, does produce immunity. Therefore we use the only method that appears to offer any great protection against the respiratory diseases in nature, namely, immunization. It must be admitted that health workers can accomplish practically nothing in the way of protecting peoples from infection with the great host of respiratory invaders, and such protection as we have is due to either the natural or artificial exposure to these organisms.

In this group we find a number of maladies that are serious enough to be effective war weapons if ways of using them can be devised. However, before proceeding we should call attention to the fact that this group also includes a large number of diseases that are not suited for military purposes. For instance, small-pox, though a very serious epidemic disease, must be dismissed immediately, since all military forces are immunized to this dreadful scourge.

Many of the diseases of childhood, while constituting a military problem at time of mobilizing rural recruits, are not suitable for military purposes for the reason that the factor of age-susceptibility is of so much importance when we consider the entire group that comprises our population. As an example we may mention diphtheria. While

in childhood a very high percentage of the population is susceptible to this disease, the great majority of these same individuals develop considerable natural immunity to the organism that causes diphtheria without further interference than normal ageing. Therefore, while we see epidemics of diphtheria in schools and orphanages, we do not encounter serious outbreaks involving large numbers of any adult population. This disease is cited only as an example wherein the factor of age-susceptibility is important; there are a number of diseases that show this phenomenon and would, therefore, be unsuited as offensive military weapons.

Certain conditions, such as influenza, pneumonia, and the common cold, do not show a marked tendency to limit their injury to any one age group and would be efficacious if they could be used against military personnel. Mankind is as helpless to-day as at any period in history in the control of these diseases; also they are very serious conditions that produce great numbers of non-effectives, and in the instance of the epidemic pneumonia they result in a very high mortality.

Before we surrender to the individuals who threaten such frightful havoc with this group, we may well ask how they are going to start an epidemic of influenza, pneumonia or the common cold. If they answer that they will introduce the germs that cause these diseases we can well laugh at them. The process is not so simple. The factors that make respiratory epidemics are not so elementary. They include not only the infection of the individual, but the question of the resistance of the infected animal. The organisms that cause these diseases are all about us. They are always with us. Epidemics mean more than simply infection; they mean the rapid transfer from individual to individual of these infective agents; they mean a lapse in the immunity of the invaded, and possibly something else.

I do not know of a bacteriologist or an epidemiologist who can tell how to start a respiratory epidemic unless the stage is especially set. I know many who are certain that whenever a large group of individuals, man or beast, is placed under poor hygienic conditions, with *over-crowding*, poor ventilation, and exposure to unfavourable climatic conditions, or other factors that decrease resistance, respiratory outbreaks will occur in spite of any precautions than can be taken, and that if large numbers of highly susceptible individuals

(rural populations) are present, the outbreak can be expected to assume epidemic proportions.

It is also worthy of note that when epidemic conditions prevail certain organisms may possibly have greater invasive power, since then apparently, populations that were not so susceptible or readily invaded may be attacked when they previously escaped injury. It will be noted that, as in the case of the intestinal diseases, so with the respiratory diseases it is not a simple case of introducing infection that constitutes a menace. The organisms that produce most of these diseases are always with us, and epidemics mean more than infection. While we cannot understand exactly how epidemics start, and we question the ability of a military agency to produce an epidemic of one of these diseases deliberately, we feel certain that if bacterial warfare is ever contemplated, they will not think of using the respiratory group of invaders for the reason that quarantine, isolation, and all other methods to control diseases such as influenza, are practically valueless. The torch once set off might destroy friend and foe alike, and would therefore prove of no value as a military weapon.

The two diseases in this group that are most frequently mentioned are influenza and epidemic meningitis (cerebrospinal fever), possibly because of their importance during the World War. All that has been stated above applies with special force to influenza, where, in addition to the fact that no one knows how to control this disease, we must add that we are not even positive about the actual organism that causes the condition. Epidemic meningitis, on the other hand, is a very definite, specific disease due to a very well-known organism. We must admit at the outset that this is a very serious disease, and that it often assumes epidemic proportions in military organizations. However, if we stop to consider the nature of the organism and the epidemiology we see how entirely unsuited epidemic meningitis is for use as a military weapon. The organism, the micrococcus of Weichselbaum, is so delicate that even on the most favourable culture media it rapidly dies when exposed for even a few hours to temperatures much below that of blood heat. This disease is spread by carriers, and the organism must be introduced almost directly from the nasal pharynx of the carrier to the respiratory mucous membrane of the individual invaded or it will be destroyed by the unfavourable temperature conditions while *en route*.

Those individuals who think this disease may be used for military purposes will answer that carriers in the form of prisoners, etc., would be introduced into the opposing forces. To those who know anything about epidemic meningitis this suggestion is ridiculous. Any military aggregation of any great size already has so many carriers present (anywhere from 2 to 30 per cent.) that the introduction of a few more or less is of no moment. Epidemics of meningitis only occur when *over crowding* is associated with conditions that lower the general resistance, such as exposure, unfavourable climatic conditions and fatigue. Meningitis is, and probably always will be, a military problem; but the individual's friends and associates, not the enemy, are the great problem with this disease.

We will not attempt to tabulate the various respiratory diseases, for the story would always be not so much a question of the great danger of the introduction of the infective agent, but the creation of epidemic conditions, a soil in which the organism could produce an epidemic, that is over-crowding and lessened resistance.

The Insect-transmitted Disease.

These diseases will probably most certainly influence wars of the future as they have in the past. An invasion of such a country as Mexico, at the present time, would constitute more of a sanitary than a military problem. With malaria, dengue, and possibly even yellow fever along the seaboard, and typhus endemic in the plateau district, the main problems would be sanitary. Bubonic plague might also be encountered here as well as in any other place. This disease—bubonic plague—is the disease entity that many consider best suited for military purposes. To begin with, it is a most serious malady—a decimating disease that has most profoundly influenced warfare in the past. It is possible that the rise of the Mohammedan world was due to a great extent to the fact that Europe was in the throes of the greatest scourge mankind has known, the plague, at the time that Mohammed's followers were ready to organize and extend the influence of the crescent until the horns were about to encircle the Mediterranean. Certainly these Arabian tribesmen had never shown any signs of military greatness or valour prior to this period, and is it probable that their religious ardour would have met with small success against the well-organized nations of the time if these nations had not been practically exsanguinated by the "Black Death."

The use of bubonic plague to-day against a field force, when the forces are actually in contact, is unthinkable for the simple reason that the epidemic could not be controlled. Infected personnel captured would provide the spark to set off possible outbreaks of pneumonic plague in the ranks of the captors. Infected rats would also visit and spread the condition. An advance over terrain infected with plague-bearing rats would be dangerous. Therefore, except as a last desperate, despairing, hope of a rapidly retreating army, the use of plague by forces in the field is not to be considered.

The use of plague to harass civil populations presents less difficulty than the use of the organisms against a field force. Those who think that plague will be used as an offensive weapon consider that civil communities may be infected by introducing plague-infected rats. Of course, this is easier to state than to accomplish, but it may be possible for airplanes flying low to drop recently infected rats. At least this is the statement that the individuals make who consider feasible the use of this weapon. Even with so terrible a pandemic disease as plague, however, there is a great deal more to the question of epidemics than mere infection. For instance, to cite an example, one that Gill so forcibly states, "Not half a dozen cases of plague occurred amongst Europeans (including British troops) stationed in the Punjab during the year 1924, when about 500,000, or one-fortieth of the indigenous population suffered from the disease."* If these intelligent people were able to avoid the infection when residing in an environment that was literally infiltrated with the infection, it certainly should be possible to control bubonic plague in a population such as we have.

For that matter, the question of plague is not a condition that takes us to the outskirts of civilization. Our own Pacific Seaboard became infected in 1900, and following the San Francisco earthquake the infection extended and is now more or less endemic as a rodent disease involving not only rats but ground squirrels. Here again it is not a question of can we control the infection; we are controlling it, and have not had an outbreak of human plague of sufficient size to designate as an epidemic.

The other insect-transmitted disease that is most frequently assigned a place of importance as an agent suited for warfare is typhus.

* Gill, C. A. : "The Genesis of Epidemics." London, 1928.

This disease is certainly terrible enough, and the military and civil populations that have been destroyed by typhus bear witness to how effective this agent of destruction can be. However, again we have a condition that is easily controlled. Complete solution of the problem of endemic typhus is not yet in print, although it is probable that the work of such men as Dyer, Maxcy and Zinsser will soon offer a complete explanation of how this scourge simmers along during the inter-epidemic periods. Epidemic typhus is thoroughly understood. The epidemiology is so simple that it can be embraced in the name of the transmitting insect, the body louse. The control of epidemic typhus is the simple question of the control of louse infestation. Of course, quarantine will help to prevent the introduction of the infection, but quarantine is futile if an army is allowed to become lousy. A lousy army may become the victim of typhus, even in America, without the introduction of infection from extraneous sources. The weight of opinion in the best epidemiological minds is that, as Maxcy suggested, endemic typhus is probably carried over between epidemics in a rodent reservoir. Endemic cases occasionally occur when transmitted to man by an insect, and when the infection is passed from man to man by the body louse, with the resulting enhancement of virulence, epidemics may be expected to result.

The difficulty of starting an epidemic of malaria, yellow fever, or trypanosomiasis (sleeping sickness) appears to be obvious, for no one has suggested the use of these agents. Those who understand the epidemiology of these diseases know they are not suited for war purposes, even though they realize the problem they present to military forces in endemic areas.

This completes the study of the communicable diseases. We have discussed in some detail practically all except the direct contact group. The only diseases of this group of great military importance are venereal, and we have given our reasons for dismissing this group from consideration.

The Infective Processes.

Certain disease processes that affect the tissues are caused by living organisms and are, therefore, designated as infective, even though they are not considered communicable in the sense that they tend to be transmitted from man to man. These disease processes

include such infections as tetanus, gas gangrene, anthrax, and the ordinary pyogenic (pus-forming) invaders. The agents that produce these infections have all been mentioned as possible war weapons, and it must be admitted that so far as the first three are concerned, with some scientific judgment on the part of their sponsors.

The agents that cause tetanus, gas gangrene and anthrax are not delicate organisms such as the relatively short-lived, easily-destroyed pathogens that cause most of the communicable diseases. They are very resistant, spore-forming organisms, generally capable of a prolonged period of viability without loss of virulence, even when separated from the animal tissues. It is not surprising, therefore, to find one of this group (anthrax) selected as the infectious agent best suited for military purposes by a science student preparing an undergraduate thesis on "Bacteriologic Warfare."*

In fact this selection of anthrax and the entire study shows more intelligent thought than any article that has come to the attention of the writer. His description of the characteristics of the proposed bacterial invader are worth quoting :

"What shall we say are the requirements for a perfect military pathogen? It attacks preferably both man and animals. It must be quick-acting, highly virulent, and capable of causing disease in small quantities. It must be highly resistant, capable of surviving outside the body under the most adverse conditions, and even resisting partial cooking or a careless attempt at sterilization (a spore-former). The causative organism should be able to force its entrance through all the avenues of infection; respiratory tract, alimentary tract, and breaks in the skin. The disease should not be too actively contagious, and it must be very well understood—for pathogens should never be used without contemplating the possibility of their getting out of control. Finally, and perhaps most importantly, it should be possible to obtain large quantities of the pathogen in virulent strain and spore form with the least possible manipulation and delay."

After this excellent description of the perfect hypothetical agent, he selects anthrax as the agent best suited to meet the requirements of a bacterial weapon. Still, I cannot agree with him that "Anthrax satisfies the requirements almost perfectly;" but I believe all bacterio-

* "Some Thoughts on Bacteriologic Warfare," C. F. Pentler, Mass. Institute of Technology; Department of Biology and Public Health.

logists will agree that he has selected the agent that most nearly meets the requirements he has so well outlined.

These spore-forming invaders are a real problem. Tetanus and gas gangrene are pathogenic processes that have always been associated with gunshot wounds and are, therefore, of special interest to the military surgeon. They do not produce epidemic diseases, however, and they are not communicable. They have to have a portal of entry made for them, a wound, and while the use of these organisms to contaminate battlefields might cause an increase in the number of cases of tetanus and gas gangrene, they would not increase the number of casualties. They would only complicate the treatment of those already disabled. It might be added that we have an entirely satisfactory serologic prophylactic agent for tetanus, and that as a result of the surgical advances of the last fifty years, gas gangrene is less frequent than in the pre-bacteriologic days.

We cannot dismiss anthrax so readily; however, it is worthy of note that although anthrax is almost a world-wide disease, nevertheless anthrax infection of gunshot wounds is practically unknown. If gross contamination of battlefields with the organism of anthrax is effected, it is granted that cases of anthrax infection of wounds will occur, and possibly some few cases of infection in individuals who have not been wounded; but when we consider that human epidemic anthrax is unknown during the bacteriologic era, I question if we need fear greater danger from this organism than contamination of wounds.

It will be noted that up to this point we have not discussed the technical difficulties that a military force would have in contaminating a hostile force. The difficulties in the case of the communicable diseases are so obvious that they need not be mentioned. The epidemiologic factors make the communicable diseases unsuited for offensive military use. The causative organisms are all either short-lived when separated from the living tissues or else readily destroyed by ordinary routine sanitary precautions.

We cannot make this statement concerning the highly resistant infections such as tetanus, gas gangrene and anthrax. These agents are admittedly the most dangerous; but it must be remembered that to be dangerous they must be alive, and that many technical difficulties present themselves, if living agents are adopted, that are not present when missiles and chemicals are employed. Shells can be

used to project missiles and chemicals on to an enemy many miles distant; but bacteria cannot be treated in this way. No living organism will withstand the temperature generated by an exploding artillery shell. Airplanes may contaminate terrain, but their effect would be quite local and probably less dangerous and less certain than high explosives used in the same way.

It is not maintained that bacterial contamination is impossible. A retreating enemy may hurriedly contaminate the terrain that is to be evacuated. However, it is believed that the use of living organisms in offensive warfare presents technical difficulties that are not generally considered. The contamination that agents and other individuals could effect, using the only really effective agents we have mentioned—the highly resistant, spore-forming organisms that are so dangerous to wounds—would prove too local to be of any value whatsoever.

Toxic Products.

The forms of bacterial warfare include not only the possible distribution of living organisms in the force of an enemy, but the possible use of toxic products derived from bacteria. Certain of our bacterial toxins are the most deadly poisons known. The toxin of the bacillus botulinus is so powerful that instances have been recorded where toxins have been produced so toxic that .005 milligramme killed a 250 gramme guinea pig. This material, botulinus toxin, is poison for man. It is possibly the most toxic agent known, and will produce the lethal effect in whatever way the material is introduced into the animal. If consumed with food, injected into the tissues, or even dropped on to the mucous membrane or conjunctiva, it is equally deadly.

This must be the material referred to when we read such dramatic statements as the following: "An airplane can carry sufficient toxins to destroy an entire city." Such statements have an element of truth in them; in fact they are conservative. An aeroplane could carry enough of the botulinus toxin to destroy every living man in the world if administration of the toxin was as simple a process as production and transportation.

There were over 100 billion bullets manufactured during the World-War—enough to kill the entire world population 50 times; but a few of us are still alive. It is easy to calculate the lethal (fatal)

dose of a toxic agent ; but I do not think it is so easy to reckon on its casualty-producing power as a military weapon.

The hostile aviator will not be received with a welcome, nor can he expect to land at an aerodrome near any large city and find the entire population lined up ready to accept the carefully measured lethal dose of botulinus toxin.

The release of vast quantities of botulinus toxin over a large city may produce human casualties; nevertheless, the extent of the damage might be only the wholesale destruction of rodents, sparrows, and possibly numerous cats and dogs. It is difficult to evaluate properly the possible effects of the bacterial toxins. Certainly such statements as an airplane destroying an entire city with toxins is ridiculous ; but they may have a value comparable to chemical agents, with this great disadvantage, however, that bacterial toxins are readily destroyed by heat; therefore, like bacteria, they are unsuited for use in shells.

Animal Diseases.

The use of living organisms to produce disease in live stock, such as horses and mules needed for transportation of army equipment and supplies, has been mentioned as a possible form of bacterial warfare. It is believed that the difficulties here are quite similar to those mentioned for diseases attacking man, with the great advantage to the defence which the veterinary officer will have in controlling epidemics. The veterinary officer can destroy any animal or group that he considers a menace to the health of the animals in the army. The medical officer cannot take such steps to control epidemics that threaten human populations.

If we expand the term bacterial warfare to embrace such phases of biologic warfare as will include the agricultural pests, then, an additional factor to consider is the fact that agents and possibly hostile aviators might inoculate growing crops with such pests as the boll weevil, the corn borer, the Mediterranean fruit fly, and like destructive agents. These agents in most instances, however, take so long to invade sufficient terrain to be effective in destroying crops that their value in actually overcoming the resistance of a foe is questionable. They take several years to advance over a large area, and might prove an economic problem years after the war has been completed ; therefore, they violate one of the fundamental ideas in warfare, since they

would interfere with the ability of the conquered nation to pay the victors for the defeat they had suffered.

Conclusions.

It is believed that the development of implements of warfare represents an evolution based on the gradual application of the improving mind of man. The one factor of importance in this development has been effectiveness. It has been a question of the clever mind versus the strong back ; of the thinker versus the lifter. It is believed that the future of warfare will be based on the same principles. It is, therefore, apparent that the question of whether chemical munitions will be used or not, and whether bacterial warfare will be used or not, will depend on their practicability rather than on the sentimental reactions of pacifists.

On the other hand, I consider that it is highly questionable if biologic agents are suited for warfare. Certainly at the present time practically insurmountable technical difficulties prevent the use of biologic agents as effective weapons of warfare.

WHAT EVERY YOUNG OFFICER WANTS TO KNOW.

By "MOUSE."

A.—"*I have, therefore, had every opportunity of studying the lines on which your course is conducted, and in my opinion it would be difficult for these to be improved upon.*"

Extract from a published testimonial, signed by a distinguished General Officer, testifying to the merits of a certain commercial school of instruction for young officers.

B.—"*It is the duty of senior officers with their greater knowledge and wider experience to encourage and guide their juniors in their individual studies. They must first and foremost assist them in the interpretation of the principles of war, as enunciated in the Field Service Regulations, by means of concrete cases from military history. They must also show them how to study military history and the regulations in the light of these interpretations.*"—Training and Manœuvre Regulations.

For the promotion of efficiency and uplift of the Army in India we have nine schools of instruction :—

The Senior Officers' School.

The Staff College.

The Small Arms School.

The Machine-Gun School.

The Equitation School.

The Signalling School.

The School of Education.

The I. A. S. C. School.

The Army School of Cookery.

Besides, there are minor schools for the technical services, air, tanks, motor transport and so on, concerning which I dare not presume to write. Before the Great War fought to end schools of military instruction there were four establishments ; staff, small arms, horses and signalling. In those mediæval days it was expected and taken for granted that an officer or N. C. O. could become senior without

special academical qualifications, could look after his transport and could read and write.

The necessary specialistic qualifications which trench warfare and the masses of personnel involved led to the rise of a host of small schools which produced technical experts in gas, bombs, camouflage, and machine guns. This mass production of specialists was a necessity incurred by the special conditions of a war which, if I am to believe all modern military thought, are not likely to behave like that again. But we still have the legacy of those old-fashioned conditions in the shape of numerous schools all designed to produce the ingrown expert in machine-gun locks, flint-locks and fetlocks.

Let us review dispassionately and as calmly as possible some of our schools. No ; let me to do it, because in some cases I shall probably do it unfairly, and because although some of the opinions expressed may represent a majority, some of the others are certainly personal and rather naughty.

The Senior Officers' School.—A most excellent institution. No praise can be too high for a school which receives dithering, incompetent, self-distrustful and narrow-minded Majors, and returns them to their units confident, keen and anxious to share their knowledge with their juniors. Cavalry majors learn that infantry are not all feet ; infantry majors learn that the cavalry are not always watering ; and gunner majors gain the priceless knowledge of close and intelligent co-operation with troops who have not the time in battle to do so. From my own point of view—very prejudiced when I survey the enormous number of my contemporaries with whom, sooner or later, I shall have to combat regarding command of a battalion—I think that this school could afford to be more rigorous in its bowler-hat-tricks.

The Staff College.—Hush. Every year this college turns out about seventy good staff officers, of whom about forty (a generous statement) are good regimental officers. Personally I view the increasing number of staff college graduates with the greatest dismay. The annual census shows clearly the primeval urge of the survival of the fittest, and merely because the incandescent letters *p. s. c.* are generally and rightly recognised as labels of good brains, concentration and military ability, they tend to be recognised now as an alphabetical decoration affixed for insurance purposes. The future for most officers is uncertain, but I must deplore the modern tendency to ensure

it by sacrificing regimental service.* I may be exaggerating this tendency; but how many *p.s.c.* officers of the present generation will lay their hands on their hearts and be content to remain with their regiments when war breaks out? The regiments themselves will need them desperately, and the staff of the higher commands has always in war found adequate adherents without denuding the battle troops of their most brilliant stars.

The Equitation School.—The cavalry academy is a common butt for military and other humorists. I, on the contrary, wish to regard it seriously. We have here a school, built, equipped and staffed to teach horse management, umping, equitation, polo, reconnaissance duties, horse-dealing and all the other cavalry side lines. I believe it carries out these duties extremely efficiently and turns out annually large numbers of cavalry officers who have benefited both themselves and the Army by the work they were forced to do therein.

So far so good. But what about me? Man and boy for the last decayed decade everybody has been driving one word into my ears—co-operation. Success in battle depends, I have been persuaded to believe, on co-operation between all arms. Battles are fought by the infantry who supply and man the targets, and are won and exploited and decorated by the psychological intervention of the other more volatile arms. So far as I can gather from the latest modern military thinkers Mobility is now the favourite runner among the Principles of War. "Infantry must be made more mobile," they say. "Infantry must adopt more cavalry methods," they mean. Now I admit most cordially that the average infantry leader is a dull dog, a slow coach, hide-bound by all the traditions which encompass and befog all earthy movements, apt to see no further than the next pair of boots, slow—dangerously slow—in appreciating topographical features, blind—sometimes stone-blind in summing up quickly a situation. That is why so comparatively few infantry officers rise to General rank.

But is it altogether the infantryman's fault? What encouragement does he get to become more cavalry-minded? The various post-war schemes devised to increase co-operation between the various arms have lacked vitality and enthusiasm. One cannot absorb the cavalry spirit in one patch-worked month's attachment to a regiment

* (We must disagree with you here. The War Office lost 85 % of its *p.s.c.* officers during the first year of the War.—Ed.)

doing troop training. It would be more beneficial to exchange for six months a squadron leader and a company commander in the same station and let them learn by each other's mistakes. But possibly it would be more agreeable for the infantry company commander if he could be allowed to do a long course at an Equitation school. After all, the work taught at Saugor is only the applied science of animal management and minor cavalry tactics—knowledge which the masses of senior cavalry field officers in their own regiments are equally capable of imparting. But the infantry officer is forbidden to water at this fount of wisdom—with the lamentable result that the great majority of higher appointments tend to become a cavalry preserve. And no one knows better than the infantry what a menace all this is to the infantry in war. A surprising number of infantry officers need only the encouragement and confidence gained at Saugor to become even more audacious than their mounted colleagues.

Weapon Training Schools.—I don't know which I liked better, Pachmarhi or Ahmednagar. I had a most interesting, instructive (and amusing) time in both places. The sergeant instructors viewed my appearance on parade with bitter despair but they took commendable pains to ensure that the minimum of their technical instruction would be drilled into the soft parts of my brain so that I would not altogether disgrace their squads. The officer instructors were terribly kind and very grateful when a gleam of slight intelligence flickered on my face. But, it must be admitted, the greater part of the intensified training was boring. If anybody asked me to strip and assemble a M. G. lock now—I did it in fifty seconds once—I would make a complete mess of it. If I were asked at this moment what the 3rd Muscle Exercise is (or was) I should burst into tears and reply that my book must first be consulted. And yet I have spent hours and hours stripping locks and exercising muscles.* On the other hand, I think I would remember the tactical principles of fire and movement and the tactical handling of machine-guns. Why is it that one can remember the essential things about weapons, and forget so easily and quickly all the fiddling little technicalities on which so much labour and time have been spent? Is it because one is normally steeped in deeper things? Is it because one has four Indian officers, four havildars, seven naiks and many lance-naiks, who are even more deeply and accurately saturated in this tangled machinery? Or is

* (This criticism is obsolescent.—Ed.)

it because one does not give a damn if the safety-catch is propelled by the primary digit or by the unhygienic thumb so long as the firing party are in the right place at the right time to hit the right target ?

The School of Education.—Common belief has it that Mr. Lloyd George foisted this encumbrance upon an unwilling Army Council. This is probably as untrue as most of the post-war crimes saddled upon this distinguished statesman, but rumour dies hard, and certainly in their initial stages the schools of so-called education were liable to derision. But once they got into their stride they have forged along, and brought the three "R's." into the common perspective of all ranks. Within the last ten years the spread of knowledge in Indian units—and I presume British units have gained correspondingly—is rather extraordinary. Whether all this book-learning is a good thing or a bad thing I am incompetent to judge, but the fact remains that one now finds and *demand*s far more intelligence and far more quickness in the uptake regarding all the horrible technicalities of modern soldiering than did our pre-war soldiers.

All schools now demand certain certificates of education before pupils are admitted. Compare these drastic qualifications with those of 1912-13 and it will be seen at once that the schools of education play a very important part in training the army.

I shall perforce eschew comment on the Signalling and Cookery schools at Poona, because for neither was I ever chosen. But I imagine that the same strictures which I have dared to level at other technical schools could be applied equally. Indeed, regarding the signalling school, I have met young undergraduates so boiled in communications and their complications that they would prefer to set up a "station" and demand receipts of messages in triplicate rather than bawl a message across a valley. The cookery school must be an excellent place, but it should be open for admission to the wives of most officers. (This is, however, a health view which could be brought up better by the medical authorities than by me.)

Having now reviewed summarily and with marked prejudice the benefit and idiosyncrasies of our main schools of instruction the question now arises if they are worth all the time and money I spent in them. What Government spends on them is a matter of complete indifference to me ; they are cutting my pay to do it.

It is more important to consider what I could have done with my money and, incidentally, A. H. Qrs. with their's. An officer's

main functions in life (apart from being on the staff) are to train his men in peace for war and to lead them in war. During the present peace officers are being taught to be technicians; their brains are being filled by all sorts of pettifogging details of pull-throughs and pull-offs; the nice pulling of a horse's tail leads to more commendation than the reading of a map; and Jove laughs at our M. G. lock-smiths. It is the task of commanding officers to instruct their young in tactics. This works out in a series of T. E. W. Ts., and in the training of platoons, companies and the present curtailed manoeuvres.

The junior officer, just as sensitive to rebuke and condemnation as any recruit, avoids as much acrimonious unpleasantness as possible by striving to do everything according to the drill book or his C. O.'s well known pet fancies. I have done it myself hundreds of times and it is a common fault among the "yes-men" of higher formations. He applies no initiative, he works out situations slavishly to agree with accepted tenets, he works horribly from hand to mouth in his endeavour to escape a raspberry, he brings no imagination to bear either because his has been atrophied in the mill or because it died when he was at Sandhurst; he hardly thinks. No wonder fellows get tired of regimental soldiering and seek more interesting billets on the staff.

If this is a fair picture of the average regimental tactical outlook among young officers we might well seek the reason. I think it is lack of military education. We teach all our N. C. Os. and Indian officers up to the standard of the next higher rank; we teach our all young officers down to the next junior rank, imparting here and there vicariously a veneer of higher instruction which looks all right on paper. This attitude was commonplace and understandable in the pre-war days when only ordinary intelligence was expected in soldiering, but now in 1934 when it has been realised at last that the military profession demands the highest intelligence in all ranks and when a great mass of schools of instruction are maintained to ensure efficiency it does seem rather odd that the junior officer (who leads the men in war and is expected to win the battles) receives only the most slipshod and undirected treatment. I think the poor chap is neglected and that is why I am writing this article. Regimental and Brigade Training of officers, sound and helpful as it may look in reports, is spasmodic-

cal at the best of times and eye-wash the rest of the time. The officer, dragged away from his musketry or his office, cannot devote himself whole-heartedly to the problems, rarely prepares himself, and has no background to contest the spoonfuls of tactical instruction poured down his throat. He swallows it smartly, and rushes back to his office or his range.

The junior officer—officers from five to sixteen years' service—needs tactical training. They require a school where they can meet officers of the other branches of the service, they cry out for instruction in the handling of platoons, companies, squadrons and general officers. The running of T. E. W. Ts., the co-operation with the other arms, the issue of orders—and above all, history—are their most bitter necessities. The staff colleges help one to wage the most glorious and magnificent wars and assist one to mobilise a railway system, but it is without their province to teach me to teach Jemadar Filana Khan that if he persists in picquetting that hill in that slovenly manner he will suffer the same fate as did Subedar Canary Singh in the Tirah in '98. The senior officers' schools have their own work cut out to improve the race. But the young officer is sent from technical school to technical school, picking up a certain amount, but given no real foundation.

What is the solution, if any? Very tentatively I would make the following suggestions :—

1. Each battalion or regiment maintains one junior and selected officer in charge of all weapon training, trained at both the Small Arms and Machine-Gun schools. Under him is the Training Cadre for instruction in these weapons and his is the responsibility for producing N. C. O. candidates for these schools.
2. Each company or squadron has one Indian officer or N. C. O. responsible for Weapon Training under the supervision of the company (or squadron) commander. This officer is responsible for weapon training within the company, and this responsibility is not shared.
3. The Signalling Establishment and methods of training to remain as at present, but the high test of efficiency demanded in this branch of training not to be so stressed in annual reports.
4. The Equitation schools to be thrown open to infantry officers if their continuance (in the light of my further suggestions) is insisted upon.

5. The reduction of the officer classes in the Small Arms, Machine-Gun, Educational and Signalling schools, and, if necessary, the abolition of the Equitation School. This will save money.

6. With the money thus saved inaugurate a Tactical School for young officers. In fact, I would like to inaugurate three schools; one at Quetta, one at Dehra Dun and one at Ootacamund or Wellington.

The first objection to No. 6 suggestion will most certainly be financial. "My dear chap," the interested senior officer will say, "and where is the money to come from?" "My dear old boy," I will reply in words to that effect, "partly from the savings on the other schools, and partly from the money annually invested by officers in various commercial academies in England."

"You don't say;" they will, I hope, ejaculate.

"I could say much more than that, Sirs," I won't say, because I am by nature fond of Generals.

Fooling apart, I feel religiously that three small tactical schools could be run in India at a cost very minor in comparison with the great improvement which could be rendered to the efficiency of the junior leader. If the experiment could ever be considered seriously I would suggest the following opening lines:—

1. A Voluntary School. Officers going up for examinations or otherwise keen on their profession to be asked to apply for permission to attend. Railway fares for themselves and servants paid by Government. No T. A. and no D. A.

2. A specially selected instructional staff to be in charge. A commandant to lecture on military history in his spare time and maintain benign discipline during the rest of his sleeping hours. Two instructors on tactics, one cavalry and the other artillery; I think both should be *p.s.c.* with a good regimental foundation. One instructor for military geography and military law (from the infantry if existent).

3. The syllabus (enough to cover two months' privilege leave and exciting enough to remove the dust and ashes from the regimental officer's mouth) should be devised to cover more than adequately the subjects for the next year's promotion examinations to Captain and Major.

4. The students should be encouraged to enjoy themselves both in their work and play. Debates on topical or historical military subjects should be arranged in an informal atmosphere, both to develop powers of expression and combativeness in argument and to promote study.

5. Care would be necessary to ensure that a proportion of all arms attended each course. Too many infantry would make it dull ; too many cavalry would make it frivolous ; too many artillery would make it a pig-sticking centre. But a good mixture, including R. A. F. and R. T. C. officers, would broaden all the minds engaged in such study, and increase or bring to birth an elementary idea of each other's capabilities in War. For such a consummation of the present fundamental anguish for co-operation between arms even the wages of the instructional staff should not be too great a price to pay.

In conclusion, for those of my readers whom I have so far failed to convince of the necessity for such a school, I should like to quote some advertised testimonials presented to a commercial military college during the last few years :—

- (a) "Your postal courses should not only enable officers to pass their examinations with credit, but should also benefit the Army generally."
- (b) "I consider that the work done by the.....College is of great value to the Army."
- (c) "——many officers have derived great benefit from your courses....in acquiring knowledge of their profession which is likely to be a permanent asset to them and so to the Army as a whole."
- (d) "The value received, however, must be dependent on the time given to study, and it is gratifying to learn that so many officers are seriously engaged in widening their military knowledge."
- (e) "To go to a crammer or work at a course when on leave is always irksome."
- (f) "Apart from the examination standpoint, there is no doubt that courses such as your college provides tend to improve the general and professional knowledge of officers and are, therefore, a great advantage to the Army as a whole."

These excellent chits were written by very senior officers to whom the training of the post-war army has been entrusted. That such handsome and deserved tribute should be paid to such an unofficial institution strikes me as being very magnanimous, but they are also an acknowledgment that such institutions are necessary. Whose fault is that?

P.S.—I can endorse thoroughly all these testimonials from personal experience. It cost me fifteen quid.

ROUND THE WORLD.

BY COLONEL E. F. W. BARKER, C.B.E., D.S.O.

The following notes are compiled by the writer from a recent tour. They may be of interest to officers in India and the East who contemplate a similar way of spending their leave. Those of the British Service who are stationed in India are entitled to eight months' leave during their tour, and it seems the chance of a lifetime as they are already nearly half way Round the World, not to complete 'The other half.' To officers of the Indian Army the opportunity is always with them. This also applies, of course, to other officers stationed further East.

Like most things, given the time and no obligation to visit England, it resolves itself into a question of *cost*. The first matter for consideration is the advertised fare. A 'Round the World' ticket from Bombay to Bombay, 1st Class costs £168-6-6d. (1934). A similar ticket from Bombay to London and return by P. and O. works out at £126. There is therefore a difference of only £42-6-6d. for the complete tour. The compulsory addition to the latter is the food on the trains, and sleeping berth on the railway across Canada. The C. P. R. is preparing inclusive meal and sleeper charges for the journey across the continent. There are also the expenses at any 'Stop overs' and ports of call such as Hong Kong, Shanghai, Nagasaki, etc., which are naturally what one makes them.

These rates can be considerably reduced by travelling 2nd Class or Tourist, both of which are quite bearable, though naturally they have not the luxury of 1st Class accommodation.

Whether you make the trip Eastward or Westward is immaterial. As the writer made it Westward it will be described in that direction. For the trip from Bombay to London no notes are necessary; we will therefore commence with England.

The choice of steamships across the Atlantic is important. The minimum fare quoted above entails travel by "Duchess" ships from Liverpool to Quebec or Montreal. They are good and the accommodation is excellent, but they are slower than the "Empress of Britain," the leading passenger ship in the World. She starts from Southampton, and is well worth the slight extra expense involved. It was in this ship that the writer crossed the 'Herring pond.'

Until one has actually travelled in a ship of this kind it is quite impossible to realise the comfort and luxury of modern sea voyage. Its gross tonnage is 42,000 tons. There is a full size tennis court, a magnificent swimming bath and a ball room. The cabins are called apartments and are the size of a large room. Everything possible is done for one's comfort—dances, 'talkies,' sports are all to hand. Meals 'la carte,' and you get what you fancy without extra charge, whilst a morning paper comes with your 'chota hazri' to your apartment.

The daily run in the open sea averages 615 miles and the crossing from Bishop's Rock to Belle Isle takes under 80 hours, the rest of the voyage being in sheltered waters. The advantage of this route for a bad sailor needs no emphasis. Leaving Southampton on a Wednesday, you find yourself at Quebec on Monday morning. Unfortunately the "Empress of Britain" cannot proceed further up the St. Lawrence so you disembark under the Plains of Abraham (famous for Wolfe's victory over the French in September 1759) after a far too short voyage. The Regiments who took part in this historic battle were the 1st Bn. Royal Sussex, 1st Bn. Ox. and Bucks L. I., 1st Bn. East Yorks, 1st Bn. Gloucestershire, 1st Bn. Loyal North Lancs., 1st Bn. Northamptonshire and 60th Rifles (two bns.). This was the second time Quebec was captured by the British from the French, the first time being on July 22nd, 1629.

The 'Duchess' boats go on to Montreal (160 miles) after a suitable halt. Presuming you 'Stop over' in Quebec, with the aid of a red-cap (Porter) you 'check' your heavy baggage, for which there is a liberal free allowance, through to your ship at Vancouver, and find it on board when you arrive.

The Canadian Dollar varies like all other currencies but is now about 5/-. Before leaving England you must make arrangements for cash during your tour. A letter of credit from your bankers is as good a way as any, and enables you to travel with as little loose cash as possible. Agents of the 'Big five' banks exist in every place, and there is therefore no difficulty in getting money on an 'as required' basis.

On landing in Quebec, avoid the Chateau Frontenac (called after Count Frontenac, a French Governor of Canada in 1672)—unless you are very rich. It is very expensive as are most of the C. P. R. Hotels. Your best plan, if you wish to do the tripeconomically, is to go (or write

beforehand) to the Chief Tourist Bureau and say what you require in the way of accommodation. There is an excellent system throughout Canada of 'recommended' billets in every town and village. As a rule these are first class, consisting of a room with bathroom plus hot and cold running water. The charge is normally one dollar (5/-). Breakfast and other meals are generally not obtainable, but these are very easily procured at 'a la carte' cafeteria, restaurants, etc. Tips in Canada are on the same basis as in England, not Scotland !

Quebec is full of historical interest and a very good book to read before arrival and also to take with you is the Historical Geography of Canada, in three small parts, published by the Clarendon Press, Oxford. One can easily spend three days here without a dull moment. In passing it is interesting to note that it was opposite to the Plains of Abraham that the 'Royal William' of 363 tons was built and was the first steamship to cross the Atlantic and took 25 days in doing so ! This was in 1832.

A visit by car or train to Montmorency Falls (10 miles) is well worth while. There you will find Kent House, now an excellent hotel, but formerly the residence of the Duke of Kent (father of Queen Victoria). You might consider stopping there a day or two, as there is a first class golf course adjacent to the Hotel. In fact you find golf courses all over Canada and members are most hospitable to visiting officers. If you have friends, so much the better, if not it may be possible to get introductions from mutual friends, and this would make all the difference to your visit. On the subject of introductions, do not forget most units are allied to British ones. If you get into touch with any officers in the former, nothing can exceed their kindness and hospitality. It is proverbial.

In the matter of drinks, it is well to remember that all hotels and trains (except in Quebec where one can get beer and light wines) are 'dry'. Liquor is obtainable at Government Stores on payment of a licence of 4 dollars (£1) after which you can buy as much as you like, but this liquor cannot be consumed in a public place. There is method in this restriction. The province of Ontario alone gets 200,000 dollars a year from such licences, a large proportion of which are taken out by U. S. A. citizens who cross the border to get a drink. One can see how the revenue of Canada will suffer when the States again go "wet".

Having done Quebec your next halt will probably be Montreal, founded by a Breton sailor of St. Malo, named Jacques Cortier in 1535, on the site of the Indian village of Hochelaga, renamed Royal Mount. If you cross the Atlantic in a 'Duchess' ship it takes you to Montreal. On the other hand if you come by the "Empress of Britain" you must either tranship or proceed by rail. The former is preferable. The Canadians are proud of Montreal, and if you read the history of the city you will find much of interest. If you do not wish to visit Ottawa, you can continue by lake steamer to Toronto. But it is recommended to go to the capital city, about $3\frac{1}{2}$ hours' journey.

When Canada was made a Dominion, there was great jealousy between Toronto and Montreal. Both claimed the right to be the seat of Government. So Queen Victoria settled the dispute by deciding in favour of neither and by choosing Ottawa. One advantage is that it is further from the frontier between Canada and U. S. A. and therefore strategically safer. The Rideau Canal is of historical interest. It was first proposed as a military measure during the War of 1812, to provide an alternative route to the St. Lawrence between the West and Montreal. It was built by the Royal Engineers in seven years (1825—1832).

Now a word as to trains in the dominions. (incidentally remember railway time is different to local time). You have a first class ticket and therefore think you are all right. But there is no such thing, practically speaking, as 3rd class. Everyone travels first so you have to pay a supplement to travel 'parlour car', or if you are spending the night your sleeping berth supplement covers it. Both are expensive. If you are travelling 'Tourist' you have the *entree* to the dining but not the parlour car. The sleeping cars are not like those in England. They consist of long carriages with berths (one above the other) down the whole length with curtains to be drawn when in bed. Bedding is provided and there are washing places at opposite ends of the carriage for men and women. Special compartments fitted up can be reserved but are most expensive, about £5-10-0 per 24 hours (for two).

Meals in the Restaurant Car are lavish and served *a la carte*—*e.g.*, you can get a plain breakfast consisting of toast or rolls, marmalade and tea or coffee for 45c (about 2/3d) or with eggs 85c (4/3d). For luncheon or dinner you will find that one portion is ample for two

people, and is a recognised custom. The C. P. R. pride themselves on the civility of their servants and from practical experience it is not an idle boast.

On arrival at Ottawa, if you have not made previous arrangements with a tourist agency, the Chateau Laurier (C. N. R.) is the best. You pay 5 dollars (25/-) for your room alone and pay for meals as required. These are not expensive, an excellent dinner costs about 6/-.

Every hotel in Canada has a 'cafeteria' where you can get 'snack' meals at very reasonable rates. Ottawa is very beautiful, is well laid out and has fine public buildings. In the summer you can get excellent golf and bathing and in the winter ski-ing.

From Ottawa you can train to Toronto, but a better plan is to go to Brockville (2½ hours) and get on one of the Lake Steamers calling at Kingston *en route*.

This is a lovely journey through the Thousand Islands. A 'stop over' in Kingston would enable you to visit the R. M. C., a training college of great interest. Unlike our own R. M. C. it provides a four years' course and students there graduate for civil employment. A very high standard of engineering is set, and all officers for the R.C.E. and R. C. C. of S. qualify at this college, also a limited number of commissions are granted to other branches of the Imperial Services, including the Indian Army. In the Cadets' Mess you will see the regimental plate of the Leinster Regiment (Royal Canadians), which is loaned to the college till such time (if ever) as they are re-constituted. Leaving Kingston by boat in the evening, you find yourself at Toronto in time for breakfast, or you can go by train if preferred.

Toronto, formerly called York, and the site of Fort Rouille is a thoroughly modern and up-to-date city. The Westminster Hotel will meet all your requirements. It is clean and comfortable and its charges are very moderate. By the way you will notice that hotel quotations are 'European' or 'American' plan. The former means room only, the latter is 'en pension'. The Niagara Falls are the 'show piece' from Toronto. These can be reached either by motor car or steamer. The former is the better.

The Canadian side of the falls is perfectly lovely and there are good hotels where one can stay the night if one desires to see the illuminations. The United States side has been spoilt by power houses

and ugly buildings. On the return journey the Brock Memorial should be visited. It is erected on the site where the British under General Brock defeated the Americans in 1812. The onward journey from Toronto should be done by Lake Steamer as far as possible.

You leave for Port McNicoll at 1-30 p.m. and embark at 4-30 p.m. the same day. The steamers are excellent and are far more comfortable than the train.

You have to pay a supplement of 5 dollars or £1 for this, but it is well worth it. You cross Lake Huron, calling at Sault San Mare (1669), now a mining centre about, 1 p.m. next day, and going through some locks enter Lake Superior at 3-30 p.m. Arriving at Port Arthur at 7 a.m. the following morning, you continue your journey by train passing the Lake of the Woods, an extraordinarily pretty journey.

It is interesting to note, by the way, that during the vacation period, at all the fashionable hotels the 'Bell boys' (corresponding to our 'Buttons') are University students. These students do this chiefly to get money for a continuation of their studies. Incidentally *never leave* your boots outside your door to be cleaned. This is a sign that you do not want them and they disappear. In spite of the heavy charges of Canadian hotels, you must get your boots 'shined' at the 'Shine shops' either in the hotel or outside. For this you pay about 20 cents.

Leaving Port Arthur at 7-30 a.m. you have a pleasant journey to Winnipeg, where you arrive the same evening. Winnipeg is not a city with much interest beyond its huge wheat trade.

The train departs at 9-45 a.m. for the journey across the prairies. This is a very hot and dusty trek in the summer months and cold during the winter. You pass through Regina, another large wheat growing centre, and spending the night in the train, arrive at Calgary at 7-55 a.m. There are several small hotels quite good and considerably cheaper than that run by the C. P. R.

Calgary is the Headquarters of No. 13 Military District. It is also the summer camp of Strathconas Horse. Being situated on the edge of the rockies it is on a wonderful site. One should not miss the chance of a visit to the Prince of Wales' (E. P.) Ranch 85 miles distant. Professor Carlisle, who is the Prince's agent on the estate is always glad to see Englishmen and show them round. The ranch is a perfectly gorgeous estate right at the foot of the Rockies. The return journey by the natural oil fields at night is never to be forgotten.

From Calgary onwards the journey can be broken at Banff and Lake Louise, but the former much advertised spot is disappointing. The scenery in Kashmir is better. The journey through the Rockies for 'the coast' is a marvellous piece of engineering. A guide is provided by the C. P. R. in the train who points out all the places of interest. At the 'Great Divide' the boundary between Alberta and British Columbia the train stops for passengers to alight and 'wish' at the parting of the streams, one of which eventually reaches the Atlantic and the other the Pacific.

Sicamous is reached the same evening, and is well worth stopping at. The hotel is at the station and on the border of the lake, where trout fishing (trawling) can be obtained. All gear is provided at a fee. The Dominion Express leaves nightly for Vancouver and gets there at 9 a.m. next day. There are many reasonable hotels in the City and places of interest abound. If time and money permit it is well worth going on a round trip by steamer to Prince Rupert on the border of the Yukon. This takes about five days. Prince Rupert is the terminus of the Canadian National Railways.

Victoria on Vancouver Island is reached by a steamer leaving at 12 noon and arriving at 4 p.m. It is a pretty journey and the ship is comfortable. Meals are obtainable on board. Victoria is very English, and if you are lucky enough to have friends in the Island who can show you round, your last impressions of Canada will never be forgotten. The Beach Hotel at Oak Bay is first class-bathing and golf being practically on the premises. It is rather expensive.

And now comes your important point about the journey across the Pacific. In planning out your tour you must remember that the Empress boats, the best on the Pacific—only sail once a fortnight. If you wish to visit Honolulu *en route* to Japan, you must go by either the 'Empress of Canada' or 'Empress of Japan'. One of these departs every month, the intermediate ships (smaller) going direct and sailing in the intervening fortnights.

You should, if possible, go *via* Honolulu, as the ships are larger and more comfortable and are oil burners. It is five days to Honolulu and fourteen to Yokohama from Victoria. Honolulu used to be a British Protectorate but is now under the American Flag. It is interesting to note that going West you skip one day (known as meridian day) so your week consists of only six days. Going East you add one day making an eight day week.

Arriving in Japan and going through the customs, where they are very inquisitive, your stay will naturally depend on the time at your disposal. The tourist's usual itinerary is Yokohama (of little interest), Tokio (Imperial Hotel very cheap and good), and Nikko, the place for temples where Kanaya Hotel is quite good, 27 yen per diem for two inclusive. (The Yen varies but may be taken now as 1/3d). A day trip to Lake Chuzenji (8 miles), the summer residence for all embassies at Tokio, is strongly recommended. The drive up the pass will never be forgotten. It is hair-raising.

You come back from Nikko *via* Tokio to Miyanoshita to the Fujiya Hotel which is the last word in comfort. Excellent swimming baths and various hot spring baths are thrown in. It is more expensive than the Imperial at Tokio. A day trip to Hakone gives you a good view, weather permitting, of Mt. Fuji. There are numerous other walks and motor drives which enable you to see and appreciate the country. From here you bus and train to Kyoto, the former royal residence of the Imperial family. A permit to visit this place must be obtained beforehand from the British Military Attache at Tokio.

Second class in the train is very good and cheap. In fact all modes of locomotion in Japan are that. From Kyoto train to Kobe where you catch your steamer. You have the option on your ticket of transferring to P. and O. if times of sailing, etc., suit. But this line does not normally call at Nagasaki. The writer continued in the C. P. R. "Empress of Russia" and did not turn over to the P. and O. till Hong Kong was reached.

It is a perfectly marvellous trip through the Inland Sea and is usually done in daylight. Your last port of call in Japan is Nagasaki, a defended port and in which cameras are therefore not allowed. A day is spent in this place. On entering the port, which is very fine, you pass the celebrated cliffs of Shimabara, where 30,000 Christians were massacred by being driven over the cliffs in 1637.

Shanghai is reached in 36 hours from Nagasaki, where the ship usually stops for 24 hours. Sailing at 6 a.m., on Tuesday, taking on a police guard for fear of pirates, you get to Hong Kong at 8-30 a.m. on Thursday.

You have now ten days at your disposal if you follow the above time table. The Philippine Islands are well worth visiting and this can be done in the same C. P. R. boat which brought you from

Shanghai. The round trip stopping in the ship at Manilla costs £9-10-0, and takes six days. That will reduce your stay in Hong Kong to about three days. There are numerous hotels with good accommodation at about £1 per diem, but the food is very poor. Repulse Bay Hotel on the South of the Island is very fashionable and expensive in the season, otherwise everything is exceedingly cheap.

You have now definitely to transfer to the P. and O. and you may notice the change. Leaving Hong Kong on a Saturday you are due at Singapore on the following Wednesday, sailing again on Friday for Penang. You live on board and make your daily trips from the ship. The new Naval Base should be visited, but a special pass from the Naval Authorities is required. You have only about twelve hours at Penang, but a run round in a car is worth while.

Leaving on Saturday night, Colombo is reached on Wednesday, the stay there being very short with little time to look around. Bombay should be 'made' on Friday morning, completing the round tour.

By travelling by the above route you will have made a tour you will never forget or regret. You will also have the moral satisfaction of travelling under the British Flag the whole way, an important matter in these days when so many foreign lines are subsidised to the detriment of one of our most vital industries.

A FLYING SUGGESTION.

BY "DIVAD."

"I also suggest that every effort should be made to direct the attention of all officers to the air and to flying as a sport. I can conceive of no pursuit, not even excepting hunting, better calculated to develop the qualities we require in an officer—resource, nerve, quick decision and an eye for country—than flying. It is not even now entirely out of reach as a sport." ("The Training of the Army for War," by Brigadier A. P. Wavell, C.M.G., M.C., in the *R. U. S. I. Journal* for May 1933.)

I have no intention of discussing here the truth or otherwise of the above quotation. I think indeed that Brigadier Wavell has correctly stated the value of flying, as adequately and as concisely as is possible in so few words. I commence by assuming that its value is receiving some thought and recognition.

It is now just eight years since the Light Aeroplane Club movement was first launched in England, and some five years since its inception in India. Previous to the movement the enthusiast could get flying in one or two places in England such as the De Havilland aerodrome at Stag Lane, and in such machines as Avres, D. H. 9s., or D. H. 6s., all of course at a fairly high price. The production of the first De Havilland Moth really made the establishment of Flying Clubs possible. The movement flourished and has been expanding ever since, though the rate of expansion in India has not perhaps been so proportionately rapid as that in England.*

It cannot have escaped notice that remarks on air mindedness have been occurring with some frequency of late in more than one of the Service Journals. The extract I have given above is one of the most welcome signs which have so far appeared that the value of

* The D.C.A. England in his article "Miscellaneous Activities in Civil Aviation" in the *R. U. S. I. Journal* for February 1933 gives the following figures amongst others:—

1925.	1931.	1932.
Clubs 6	Clubs 30	
(Just started)	Private Pilots	Pilots 2,700.
Pilots 140.	Licenses 2,091.	
	Pub. Transport	
	Licenses 315.	

The only information I have at present regarding India is that licenses (Private Pilots) were just over 200 in the beginning of 1931.

flying in the training of an officer is being recognised. Coupled with another quotation I shall give later on, it has tempted me to suggest a possible way in which opportunities for flying for the Army in India might be extended. It is a little difficult to gauge exactly how far officers in India have taken advantage of the formation of Flying Clubs to learn the "art of flying," and indulge in it as a sport. The learning is usually easier than the subsequent indulgence, in a large country like this, which possesses only a few clubs at certain places.

Clubs exist at Calcutta, Madras, Bombay, Delhi and Karachi as far as principal places are concerned. There is also one at Jodhpur, I believe Lucknow, and a previously unfortunate one is being resuscitated at Lahore. I only have the figures for one of these places, where, out of about one hundred pilots trained, eight have come from the Army. Of these eight three came from widely separated cantonments leaving five only from the garrison itself. This makes an average of exactly one *per annum* from the garrison since the Club was formed. Not on the whole a very high average. I hesitate to turn it into a percentage of those stationed there during the last four years, not only because of the impossibility of arriving at any accurate result, but also because I fear it might reveal a rather lamentable apathy in this particular cantonment towards the opportunities at its gate.

There are few of us who have not had experience of ancient relatives who stuck closely to their carriages and horses to the end of their lives, and refused absolutely to enter that dangerous and unpleasant contraption, the motor car. The number of times one hears the remark in connection with flying "No thanks I prefer to keep both feet on the ground," or words to that effect from those of middling service, leads to the sad reflection that a couple more decades may see the establishment, in Cheltenham and other resorts, of a new generation of such ancients who have never ventured into the air. It is those others (fortunately many) who still retain their power of adaptability in a changing world that one hopes questions of flying may interest. Flying is not exactly an adventure, but the regions of the air are one of the few parts of the world which still remain unexplored in full, and about which we have much more to learn. Flying is always producing for its followers new incidents and ever changing conditions.

The cost of flying is the most usual objection held up against its more extended practice. In a measure it may be expensive, but compared with other forms of sport is it prohibitively so? In India club charges for flying are about Rs. 30/- per hour for dual instruction, and Rs. 25/- for solo flying, with, in some cases, a reduction of four or five rupees after fifty hours flying with the club. The beginner will require five to ten hours dual instruction, which is followed by five hours enforced solo flying, before he takes the tests for his "A" license. His first "A" license will therefore cost him say Rs. 300-450 according to the amount of dual instruction found necessary. Thereafter he is required to do a minimum of five hours solo annually to renew his license, (in England the minimum is three hours). Actually of course he will do more in every case depending on the length of his purse. Twenty-five to thirty hours annually will however keep him in practice, if he cannot do more, and he will get a lot of value for his money.

It is one thing to take a machine into the air at some other persons expense and fly it straight for an unconsidered time; it is quite another matter to take up a machine at a personal cost of about six annas a minute. In the latter case the pilot, unless he has some definite cross country objective in view, or is joy riding an unfortunate friend, will undoubtedly only run through his repertoire and come to earth again as soon as he can. Long hours are not everything; as one of the leading British pilots once remarked "It's not the hours that matter but what you put into them."

No officer should be discouraged from learning to fly by reason of the fact that he cannot afford, or does not expect to be able to do long hours in the air thereafter. "Ground thinking" must in such cases usefully augment flying practice, for a great deal of flying may be learnt on the ground. The Light Aeroplane pilot who remembers this will find, after he has had some experience, that he is able to go periods of two or three months without flying (which circumstances may oblige him to do) and still on his return take a machine straight up and with safety into the air. This applies of course when he has had fair initial experience, and has become used to flying at comparatively long intervals, not forgetting his "ground thinking" in these intervals. At other times he may find fifteen minutes or so dual practice is necessary.

If you compare the cost of flying on these lines with the cost of maintenance of polo ponies for station Polo, or with the cost of one

annual shoot in Kashmir, you will not, I think, find the cost of flying so very excessive. Not I should say for those stationed in places where there is a Flying Club. All forms of sport cost money. Some may remark that officers are no longer able in general to afford polo, or the cost of an annual shoot in Kashmir. This may be to some extent true.

There can be little doubt that if flying costs for officers in the service could be reduced, and the opportunities for flying extended, far more officers would be interested in the matter. It is with this query as to the possibility of improving facilities for flying and reducing the cost for officers in the service, that I will pass on now to a second extract which I wish to quote.

"Great stress is correctly laid on Air mindedness in the Army to-day. Perhaps this could be encouraged more than it is. By tradition officers in the service have been encouraged to hunt and have been given extra leave for this purpose as training for war ; it might be possible, gradually, and in co-operation with the Air Force, to provide aeroplane "Boarders" for those fortunate ones who could afford the sport. In flying the Brigade of Guards is ahead of the rest of the Army with its own Flying Club. Hunting gives an eye for country ; so does flying and the development of that eye from the air perhaps takes more time to mature. With mechanised formations it may be a more useful accomplishment. Both require moral fitness." (*The Army Quarterly* July 1933, Military prize Essay, by Captain and Brevet Major D. Wimberley, M.C.)

If we are agreed as to the value of flying, is there no practicable way, apart from talk, by which officers might be encouraged and enabled to indulge in it more easily ?

The above extract contains the germs of several ideas, which when developed, might be of use for our purpose. Firstly, it suggests more encouragement is required. Secondly, it suggests the co-operation of the Royal Air Force—though for an end, the good of some "fortunate ones" which is very different from what I am aiming at. Thirdly, it mentions the existence of the one service Flying Club, and these three ideas combined lead one's thoughts to a direct suggestion.

Surely it should not be impossible, with assistance and encouragement from higher authority, with the co-operation of the Royal Air

Force, and with some keenness and energy on the part of the rest, to establish, in the first instance, a form of service Flying Club in any place in India where the R. A. F. is stationed, and later perhaps extend branches elsewhere? The exact manner in which such Clubs might be constituted is a minor rather than a major matter. The three essentials to their establishment are given above. The suggestions one could make for them are various. At one end of the scale (and this rather approaches the "Boarder" idea quoted above) one could suggest Light Aeroplanes owned and run entirely by the R. A. F. and available for hire under certain rules for instructional dual or solo and other flying. At the other end one could suggest a more truly constituted Club, a Government assisted combined service movement, appointing its own honorary instructors as it wished and found necessary, and permitted to use the resources of the R. A. F. in some degree for housing and maintenance purposes.

It is necessary to realise that I am aiming at an arrangement which might be expected to reduce the cost of flying for officers. An obvious saving takes place if Clubs can be formed with purely honorary instructors, secretaries, etc., as opposed to the paid ones employed by civil Flying Clubs. Not that honorary flying instructors are entirely unknown there. More than one Club in England has them in addition to, or in the absence of their paid instructor. A second obvious saving takes place if the resources of an organisation like the R. A. F. are made available, even in some measure, for housing and for maintenance facilities. For these two reasons we may say that the co-operation of the R. A. F. must be looked for in the formation of any service Club which might hope to work at reduced costs.

Surely such co-operation could and would be afforded?

I have before me the figures for expenditure for the year of a certain civil Flying Club. They are of interest to our purpose in showing how and where the expenses of Flying Clubs occur. Translating the figures into cost per hour of flying, we get the following interesting facts:—

	Rs.	a.	p.
Cost of fuel (oil and petrol) per hour flying ..	7	0	0
Cost of spares and material, repairs and upkeep ..	2	0	0
Cost of insurance*	3	10	0
Total ..	12	10	0

* In this case insurance with an Insurance Company is not carried out. The Club sets aside a sum annually to an insurance fund in order to cover loss. This figure has been obtained by dividing the sum set aside by the number of hours flown.

That is part of the list which I have purposely kept separate.

The rest runs as follows :—

	Rs.	a.	p.
Cost of salaries, flying, engineering, and office staff, plus travelling expenses	30	6	0
Cost of depreciation of aircraft	5	0	0
Cost of depreciation and upkeep of hangars ..	2	0	0
Total ..	37	6	0

These figures are approximate to the nearest two or three annas. The remaining items consists of sundries such as audit fees, airworthiness certificates, rent and taxes, etc., and do not affect materially the issue from our point of view.

These figures are surely very striking. The cost of purely operating expenses is a mere flea bite when compared with the cost of the staff. The first list I have given provides some idea of the costs, if an organisation such as I suggest, could be assisted firstly, by granting permission for the co-operation of Royal Air Force, and secondly, by provision of the first machines and their replacement after normal depreciation. Assistance under the first point would cost virtually nothing. Assistance under second would only amount to a very small fraction of the annual grant to any civil Flying Club. If this was not forthcoming, the cost of depreciation would have to be added to the first list, which would then reach a total of about eighteen rupees. This figure of depreciation cannot be taken with much hope of accuracy without the test of experience. If the organisations flourished and a large number of hours were flown, the figure per hour flying would be much reduced. (If we take the case of a machine original value Rs. 8,500/- and allow it a normal life for depreciation of four years, and further allow it an average of one hour per day in the air, the average depreciation per flying hour would work out at approximately Rs. 6/-. Longer average hours or the allowance of a longer life would reduce this considerably. It is evident from the Club figures I have quoted that they do better than this instance).

I have not touched on the subject of maintenance. Lest it should be thought that maintenance of light aeroplanes such as the Gypsy Moth is a very heavy burden, and an insuperable objection to the ideas I put forward, it is necessary to touch on the question. The

figure quoted of Rs. 2/- per hour will illustrate the point that the problem is not a great one. "These machines require as little servicing and maintenance," has frequently been said, "as many cars." Actually they require a little more, or at any rate a little more inspection. The engine receives the largest share of attention, but it is interesting to note, as an indication of how little is necessary, that the Gypsy Major engine is now only considered as requiring complete overhaul after 750 hours' flying. Previously top overhaul was considered necessary after 150 hours, and complete overhaul after 450 hours. Now top overhaul is no longer considered necessary and the period between complete overhauls has reached quite an amazing figure. 750 hours at an average of two hours flying per day, means only one overhaul annually. Minor adjustments of the magnetos, valves and carburettor; inspection of the undercarriage and centre section fittings and occasionally of the rigging; inspection of the control cables and a little greasing, form most of the maintenance requirements of the Gypsy Moth. The only other thing we might add is an occasional replacement.

I do not intend these figures to be taken in any way arbitrarily. They do however represent those of a working concern and to that extent are valuable. They form at least a guide to what one might expect, and appear to indicate that a service organisation such as I have suggested might be able to provide flying at prices from Rs. 14/- to Rs. 20/- per hour, according to the nature of assistance afforded.

In contrast to the far more extended practice of flying in England, and the quite ordinary part it now takes in people's lives, there is still to be observed in the Army in India a queer and unexplained feeling that flying is the prerogative and peculiar "jadu" of the Royal Air Force. This is a pity. It is no more a prerogative of the Royal Air Force than yachting is of the Navy. The work and training of the Air Force, while it embraces ordinary flying, carries them far beyond it on a very special line.

It is possible that this attitude is in part due to the ban which still exists on civil flying in Frontier districts west of the Indus, where a large proportion of the Army is stationed. I believe I am correct in saying that this ban had its origin in the International Air Convention, under which these districts were classed as a prohibited area. A prohibited area is closed to all flying except certain categories.

Other areas are open to all flying including that of foreign machines. It is I suppose on these grounds that the desirability for the retention of the prohibition over such a large area has been considered necessary. Those in touch with civil flying will remember much comment there a year or two ago on this continued prohibition over the whole area.

The classes of machines which may use prohibited areas are roughly I think military, police, postal machines and civil aircraft "when commanded by a military officer detailed for that purpose" or words to this effect. It will be noticed that machines of the proposed type of service organisation need not be excluded from prohibited areas under the grounds of the Air Convention. They could be considered as training machines of the Royal Air Force to all intents and purposes, if there was any doubt in the matter. One may add that they would have their uses for service communication purposes, in addition to anything else, and by comparison, say with a Wapiti, their small consumption of oil and petrol would reveal considerable economy.

I have suggested above the establishment of such organisations "in any place where the Royal Air Force is stationed and later perhaps extend branches elsewhere." I was considering then branches where a number of pilots might be found, and where one machine might be kept from the parent organisation and called into headquarters for periodical inspection and repair. The fact too should not be lost sight of, that, although British instructors and ground engineers with civil clubs command high salaries, there may soon be available for these purposes Indians who in their home country will accept lower pay. It might be possible to employ an Indian ground engineer with such branches at no great cost. Many competent Indian pilots both "A" and "B" licenses, already exist, and some certificated ground engineers. It is not always accepted that Indians can become proficient in these things. One has heard the idea ridiculed on more than one occasion. Those who think thus, would do well to note that at the recent passing out of Flight Cadets from Cranwell, an Indian lad Aspy M. Engineer won the Groves Memorial prize for the best all round pilot. If one's memory does not err, Engineer was not without some previous experience. Still the fact is worthy of note.

Although the Guards Flying Club is the only service club in existence, the Army in India has several advantages over the rest of

the Service for the formation of clubs. Among these are the concentrated population of cantonments, the existence of suitable landing ground for light aeroplane operation immediately on the spot in each case, and the suitable climatic conditions, particularly in Northern India, compared with that of England.

The reason why clubs are necessary for the use of the aeroplane for pleasure, sport, or communication purposes, is that the aeroplane, as opposed to the horse, requires far more steady work for its economical operation than one individual can normally give it. It is far more economical to work one machine for four hours a day than two machines for two hours, or still more, four machines for one hour each daily. The aeroplane does not deteriorate or depreciate so much in the air as on the ground, and for economical operation, the longer it can be kept in the air the better. The horse is quite a different and an individual matter. Hence although we have encouraged riding and horsemanship in the past by facilities for purchase, by cavalry "Boarder" and similar systems, we have got to tackle the question on rather different lines when it comes to flying.

Nothing of this sort can be started all at once on a large scale, but I suggest it could be started with official approval, encouragement, and co-operation. I believe there are many who would learn and take up flying, if its possibilities could be made more directly available for them and the costs reduced. Would it be too much to ask the Royal Air Force for their assistance and co-operation in this matter? Without such assistance the proposition would be liable to fall to the ground on the score of expense. I am convinced that Brigadier Wavell's far seeing suggestion deserves a better fate than this.

COMMUNAL DISTURBANCES IN WALLED CITIES.

BY LIEUT.-COLONEL H. M. BURROWS.

The special feature, which I must emphasise about internal security duty in walled cities in the east is that owing to the congested conditions under which the inhabitants live, communal trouble spreads like wild fire, and as often as not by the time troops arrive, the Civil and Police authorities are reluctantly compelled to give the situation to the O. C. Troops, as far as they know it, and then give him a free hand to clear it up.

It is therefore imperative that any Army officer should be prepared as far as possible to take over this responsibility, and make every effort to understand the people, their characteristics, languages and problems, in the locality in which he finds himself.

Incidentally, the representative of His Majesty's Government in the House of Commons has recently defined the function of our Forces thus: "Not for continental warfare, but to maintain order within the Empire." More than ever, therefore, it is our duty to ensure that each of us is ready to give that assistance to the Civil Authorities to which they are entitled and which many of us seem so often incompetent of rendering.

Actually in post-war years I have had to interest myself in and take action in the City and *Sanjak* of Urfa in the Vilayat of Diarbekr in 1919, in Jerusalem, the capital of Palestine in 1920, and in Lahore, the capital of the Punjab in 1929—1932.

Attention is drawn deliberately to the provinces and country in which these cities are located to remind readers that every city is dependent on its province, and if he is to deal with one effectively, he must not only have studied its inhabitants, but also the inflammable elements around it, generally agricultural militant races, and sometimes nomadic tribes, including professional raiders and criminal classes of all kinds.

Conditions inside the walled cities.

The inhabitants in such cities live crowded together in an atmosphere of uncleanness, poverty, rumour, crime, intrigue, mutual

distrust and often terror. Panic flies through the bazaars as if by wireless. Shutters can be flung up in front of shops for no apparent reason. This is always a squall signal, and that is why Indian agitators love proclaiming *hartals*.

A single example will be enough. One morning I saw mobs from all communities in Urfa, a town with an official population of 90,000, streaming into the country from every gate with their household effects on pack animals and carts. As soon as the inlying piquet of two platoons had reached the market square and persuaded the shops to open, the populace came back again.

The Armenians, Georgians and Assyrians said they had gone because a massacre had started. The Molsems stoutly maintained that the city had been captured by Arab tribes. I asked the local Government and Police to make enquiries and stop such nonsense. Twenty-four hours later the *Mutasarif* (Governor) submitted his report to the effect that a youth covered with blood had been seen running and screaming through the town; no one knew who he was or could find him. The *Mutasarif* and his Municipal Council were convinced that the youth was a Bolshevik agent trying to create disorder.

Thus on the flimsiest pretext any of the three cities I know will close their shops. One angry word or petty quarrel can then set the rival elements at each others throats in dead earnest. News soon spreads to the villages and tribes. If revenge or hope of loot does not bring them in, any professional agitator can. This is why the outer cordon (preferably of mobile troops) is so important to detail as soon as troops are called out.

There is never any love lost between the city folk and the countrymen. The former are terrified of the latter's martial propensities. The latter loathe the former for their business acumen and their superior education which gets them into higher places. Officers must therefore get local geography and politics well into their heads if they are really to help the civil authorities.

The relation between anti-government and communal disturbances.

These notes are headed "Communal Disturbances" because every soldier should understand how to deal with anti-Government activity. His actions must be based on his military training in

defensive tactics. Once communal trouble begins, I have been assured by Civil and Police authorities in India, that anti-Government activity will not break out.

Of this I am not so certain in other parts of the world, particularly in frontier towns, where the agents of other states or political organisations may try to seize the opportunity to overthrow the existing Government whilst its troops are engaged in quelling internal disorders. Be that as it may, anti-Government demonstrations often develop into communal attacks as in Cawnpore in 1931. In fact I believe that in Bombay every kind of public movement, even a strike, turns into a communal affray sooner or later.

Preparation and preliminary training for dealing with communal disturbances.

Nobody likes Internal Security duty, and in these busy days when a unit is exercised as to what part of its Collective and Individual Training, and heavy office work can be cut out, there is every temptation to sit down near a city and hope for the best. There is bound to be a local scheme for such emergencies and occasional T. E. W. Ts. on it may be held, but these are not nearly enough. Every time I have ever been called out I have found half the officers and most of the non-commissioned officers do not know the main streets and buildings and cannot find their way about at all.

(1). The first requisite is maps—good maps showing all the small streets, and the nationality of the inhabitants of the various quarters; also smaller scale maps of the district showing from which towns, villages and areas mobs of reinforcements of disturbing elements may be expected. It is essential that these maps should *not* be kept locked up only available in emergency, but be in the possession of everybody down to Troop, Platoon leaders and Armoured car subsection commanders.

(2). The local Civil authorities must be persuaded if possible to allow troops frequently to march round and through the city, during which junior commanders must show their men all points they require to identify.

It is extremely good both for the inhabitants and the troops to see each other. It creates a good sense of mutual confidence,

particularly as town populations are generally law-abiding, and get upset only by the activities of political firebrands.

If, however, the civil administration or higher military authorities consider this inadvisable for some perfectly good reason of their own, then regular reconnaissances by a few officers and non-commissioned officers in plain clothes must be constantly organised.

(3). The points which officers and non-commissioned officers must learn are :—

(a) Buildings that may require protection, *e.g.*, power houses, wireless and railway stations, aerodromes, telegraph and post offices and banks.

(b) Communal assembly places, *e.g.*, Political Meeting Grounds, places of Worship, Burial or Cremation Grounds.

(c) Storm centres, *e.g.*, cross roads where mobs may clash.

(4). Too much forethought cannot be spent on preliminary administrative arrangements for possible billets, horse lines, cooking places, latrines, aid posts, and communications.

Action when civil authorities require troops.

(1). The O. C. Troops proceeds at once to meet the Civil Authority wherever he requires him, gets the situation from him, makes his reconnaissance if necessary, and draws up his plan.

(2). At the same time such sub-units as may be required will stand to, and have transport sent to their lines, billets, or camps. In the above connection it is no use either :—

(a) Sending sub-units down to the city separately or collectively in case of trouble without a trained O. C. to handle them properly from the start. All that happens is they get committed piecemeal without being properly organised and without clear orders, which leads to confusion and perhaps regrettable incidents, or

(b) Ordering an unnecessarily large number of troops to "stand to" indefinitely in case of emergency, for the officers and men soon get bored guessing at what is going on, and might very well be better employed.

(3). The number of the sub-units required by the O. C. Troops depends very much upon what is available and what area has got

to be dealt with, but the most practical strength for the cities I know is :—

- (a) 1 Squadron Cavalry to patrol the outer circular road, gates and public grounds.
- (b) 1 Section Armoured Cars to make periodic reconnaissances of the main approaches for mobs or processions coming in from the outlying district.
- (c) 2 Companys Infantry for piquetting and patrolling inside the city, including a reserve with lorries ready to meet any mob reported by the mobile troops.

This may seem a small force, but to my mind it is quite enough to carry on without relief for forty-eight hours.

(4). So long as the O. C. Troops is working "in aid of Civil Power" and not under martial law, his initial plans must include the request for a magistrate with each troop or platoon, and each subsection of cars, and a constable, mounted or dismounted as the case may be, with each patrol.

(5). The first thing he must do is to secure the gates; he must then take his main "shaft" of infantry through the city roughly on the line dividing the two belligerent communities, dropping piquets at cross-roads with orders to patrol systematically towards each other and outwards to the gates.

It is always surprising to me to find how small an area these walled cities cover, although they contain a labyrinth of narrow streets and alley-ways. Within a few minutes of getting the "shaft" through, any organised fighting has been found and stopped.

(6). It must be made clear to the troops in the initial orders that if any man tries to kill them they must be sure to kill him or bring him in prisoner. The best of troops need this word of encouragement and it is the surest way of suppressing riots with the minimum of force and all round casualties.

(7). Finally officers and non-commissioned officers need to be reminded to jot down at the earliest possible moment the names of their prisoners and details of the crime they have been committing.

It is most embarrassing to find oneself in court a few days later unable to remember whether a particular accused had been found committing murder, rape, larceny, merely theft or minor violence.

Illustrations of lessons learnt.(1). *How the country population can be the cause of disturbance in the cities.*

On Easter Sunday morning in 1920 those of us, who had been to early service and had been breakfasting in the hotel by the Jaffa Gate of Jerusalem, saw a procession of fine-looking Moslems coming slowly up the hill chanting and dancing.

Enquiries elicited that this was a pilgrimage of Hebronites *en route* to Ain Musa, the tomb of Moses, to let off a little religious enthusiasm as a simultaneous celebration of a big Christian festival and holiday. I was assured that it was quite normal. The fact that they were all brandishing sticks and knives could be understood as part and parcel of a sound militant faith. They stopped at the big open space inside the gate and listened more or less attentively to an address by an elegant gentleman in a *tarbush*, mounted on a grey Arab pony. After the address the dancing and singing became even more energetic and vociferous when suddenly a number of whistle blasts were sounded. I cannot say how many of these came from Political leaders and how many from the Police. All I know is that the mob rushed down the main street into the city belabouring and knifing every Jew they met.

There was no telephone in the hotel, and I did not know that the Green Howards were at matins near by in the Armenian quarter. There was nothing to do but go straight through the mob with two brother officers to the nearest cab rank, and send them to order the battalion to "stand to," whilst I reported to the Brigade Commander.

This distinguished and capable officer took my report as all such reports should be taken. We discussed the boat race and other matters of moment until the inevitable telephone call came. The Military Governor gave him the situation in a few words, and the Brigade Commander then called up each of his Unit Commanders in turn and simply told them to put "Plan B" into effect. This plan meant that the 20th Punjabis were responsible for the outer cordon, the Green Howards for the gates, whilst my battalion were to take on the "ratting" inside the city itself.

When my two companies in readiness had arrived it did not take me long to get the main 'shaft' through Jaffa Gate—Muristan—main

cross roads—Turkish baths—Mosque of Omar. This, with patrolling outwards to the Gates, immediately cut the city into its four quarters, and by early afternoon the bulk of the Hebronites had been handed over in the Police station, the casualties had been collected, and the streets were quiet.

(2). Urfa in 1919 quite spoilt me for internal security duty elsewhere, for the local Turkish Government was in far too difficult a position not to have to rely on the British garrison for help. The *Mutasarif* was worried by the numerous instructions he got from Constantinople, which did not agree with those he was receiving from the British Government through me. Mustapha Kemal was organising nationally at Angora and the *Mutasarif* was possibly somewhat at sea. He had to try and maintain law and order in his *sanjak* with his gendarmerie considerably reduced, and his own Turkish 1st Lancers unavailable, as they had been pushed on by us to Severek.

He therefore had to come to me with most of his troubles, and I only had to keep my eyes skinned for any form of treachery, of which I had ample warning in G.H.Q. Intelligence summaries. These reports implied that Kurdish or Arab tribes with Turkish encouragement might try to push me back over the Euphrates, or besiege me in the same way as eighteen other British garrisons in Mesopotamia were besieged that year, and as my unfortunate French relief in November 1919 were treated. The latter capitulated after 60 days and were massacred.

The *Mutasarif* and his staff soon became very friendly especially after we had made attempts at conversation without interpreters present. I soon learnt that there were two stories to the local history, and although the town was noted for Armenian massacres, these had been greatly exaggerated, and the Moslems quite admitted that Christian business men were just as necessary to them as Hindus in the North of India or Jews all the world over, and they only felt incensed against them when economic conditions became too trying.

Prices had been high in the city and the *Mutasarif* attributed this not so much to profiteering but to the incessant raiding of market produce on its way to town.

I could not go scouring the country side for nomadic tribes so I had to wait until they gave me a chance. On the 15th June I saw the village of Chamouli in flames from my window, only eight miles away,

and the road to Urfa crowded with peasants followed by retreating gendarmerie. The *Mutasarif's* Secretary brought me an ideal report to the effect that the Jais Arabs advancing from the South East had now pillaged twelve villages, that the Gendarmerie could hold them no longer and would I, please, deal with the situation.

The inlying piquet, consisting of one armoured car—(I only had two)—and two platoons in lorries, was sufficient to drive the Arabs out of Chamouli that night, and put out the fire. At 02-00 hours on the 16th I moved with two small columns, one mobile (two L. A. M. B. cars and six lorries packed with M. G. and L. G. Secs.) and one of Infantry (six platoons) marching in support. We surprised the most forward Jais camp at day break, and bundled the Beni Muhammed Chief into a lorry. The further camps struck with amazing rapidity and were soon fighting a mounted rear guard action. I called off when my armoured cars were held by a defended stream, and an aeroplane, which I had asked for from Muslimiyah, came and helped me to disengage.

A "Claims office" was opened at once in Urfa, into which the inhabitants of the pillaged villages poured with extravagant bills. My adjutant and a flying officer picked up the location of the various chiefs from these visitors very quickly, and messages were dropped from the air at camps and villages warning individual sheikhs to come in to Urfa under penalty of bombing.

By 03-00 hours on the 19th the last of the five chiefs of the Jais was having coffee with me in my room, and explaining that he had no idea the British objected to local disputes, as he called them, and that he had £200 in Turkish gold and ten horses for me if I would like them. With the help of a political officer £1,800 Turkish gold was recovered from the five tribes for the twelve villages before the sheikhs were released.

Market prices then fell 30 per cent. and we had no more trouble, communal or otherwise, in the city or district, and were able to devote ourselves to the housing and feeding problems arising from the crowds of refugees of all classes who elected to make for sanctuary in Urfa.

The danger of prematurely withdrawing troops once the city is quiet.

If all goes well the first day on which troops help to restore order in a city, they should not be withdrawn entirely for some days,

possible for about a week. It takes time for tempers to recover. If the troops have done their work well, the inhabitants' initial fears change first into curiosity and then gratitude for the peaceful conditions they have brought. Naturally, it is very necessary for the civil and police authorities to take over control again as soon as matters are back to normal, but one fatal example of premature withdrawal will be given.

By 16-00 hours on Easter Sunday 1920, Jerusalem was quiet and our arrangements for enforcing curfew so complete that the Brigade Commander and I were able to visit the Military Governor and Minister for Public Security to ask them their opinion on danger points during the night. After considerable discussion of several aspects of the trouble we were told that nothing must stop the market produce coming in at day break. We were asked to withdraw all troops by 06-00 hours Monday, as they might frighten the farmers from coming in.

The Brigade Commander was very surprised, but complied. At 06-00 hours I telephoned him that the city was clear of troops, and he replied ordering me to hide a couple of platoons somewhere convenient as he was sure tempers would still be running high. I had not begun to shave in my billet before news reached me that the Hebronites under police escort had marched through the city, broken out, and were in full cry in the Jewish quarter. Martial law was proclaimed at once, we hurried to our original posts, and although we managed to stop all activities such as murders, incendiarism, rape and looting by Tuesday afternoon, we had to be much more drastic than on the Sunday and we could not even begin a gradual reduction of troops on duty for a fortnight.

Controversial topics in connection with internal security duty.

(1). No town and no situation is ever quite the same. The communal disturbance cannot take place unless some normal arrangement has gone wrong. It is only by learning your city and its authorities that you can hope to tackle it with confidence. It does not matter how many instructions or rulings are issued for guidance based on experiences elsewhere; you are pretty sure to bump into some situation which has not been legislated for.

These notes are only written in the hope that they may help others to remember that the trouble comes unexpectedly. It is no use

hesitating; and there is a general amnesty for all who have done their best quickly in good faith, using the minimum of force. There is a great tendency to make rather heavy weather of a simple job, especially if fellows let their initiative and common sense be submerged by cloudy recollections that they are going to do something that is not quite in accordance with something that has been laid down somewhere.

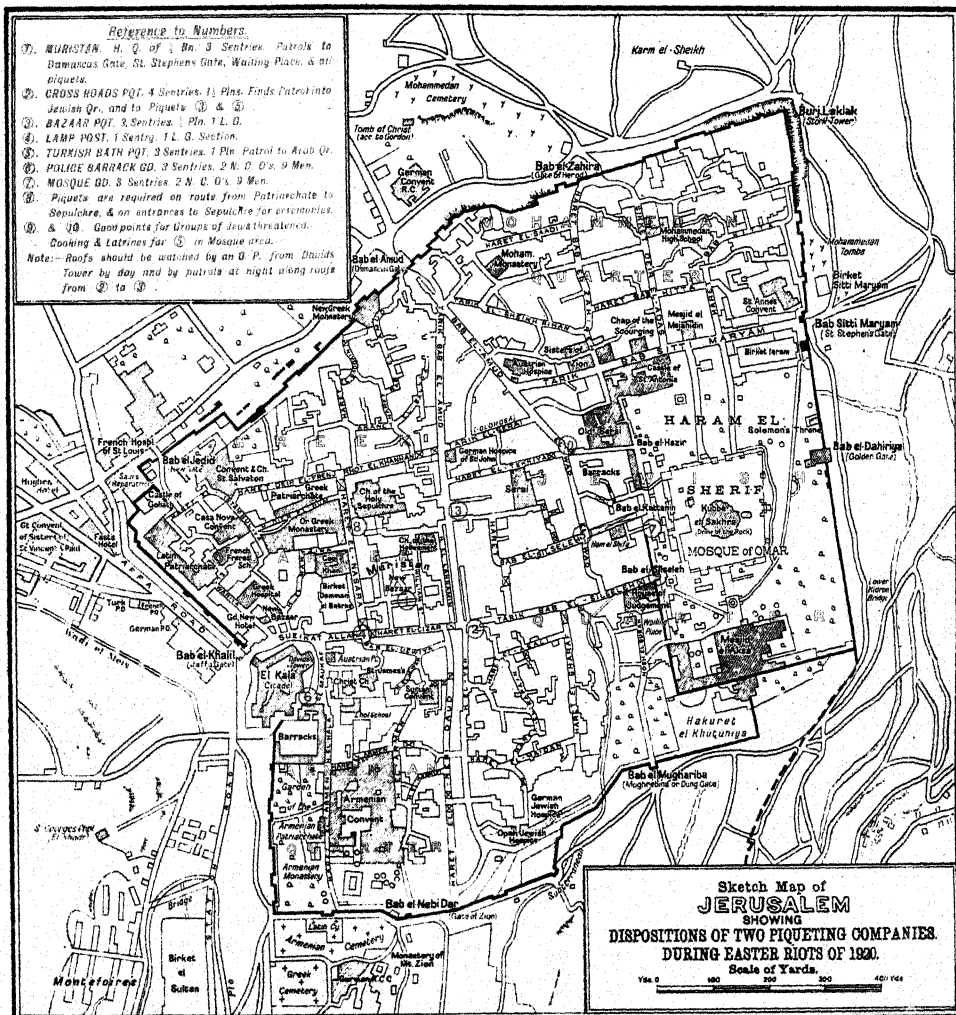
(2). I have been surprised to hear officers saying "Well I've told my men never to get within a hundred yards of a mob" or "I certainly won't distribute my battalion inside a city in smaller parties than a platoon." This merely shows they have not visualised what happens, and have not explained to all ranks not only their right to defend themselves, but their ordinary duty as citizens.

Patrols under an officer or N. C. O. from a good battalion are quite capable of stopping, (and often have stopped,) a roaring mob, or dealt with a house that has fired on them.

(3). It has been so strongly impressed that troops must be used as such in an entirely different way to police that many seem afraid to help the police out when they need it and ask for relief. My experience has been that by the time one has had to get busy in a walled city the police have been on their alarm posts for 48 hours or so and have had a rough time. They are tired men. The quickest way to get them fit for duty again is to respond at once when asked to relieve them of piquet and patrol duty, so that the majority can rest for a night or so, while only those necessary as guides, arresting authorities, and traffic control remain at their posts.

(3). Since the regrettable incident in Peshawar in 1930, when armoured cars were burned in the city, great hesitancy in using them prevails. The orders are that armoured cars are not to go into narrow streets, where they cannot manoeuvre, nor are they to get mixed-up with the crowd. In the light of these orders very thorough reconnaissance is necessary before armoured cars can be ordered into a walled city. Yet it is most desirable that they should be used down main arteries.

When troops have to enter the city either the streets are empty save for a few scurrying armed individuals and odd missiles, or packed with innocent persons through whom one must press without hurting them. Under both conditions a sub-section of armoured cars proceed-



ing in low gear closely supported by the piquetting company is far the best formation in which to establish the "shaft." A mere hooting touring car is a poor substitute.

(4). British and Indian troops should not get mixed, but it is extremely easy to lose one's way inside cities and be out of touch with what is happening. This has led to discussions as to what is to happen when the Indian officer and the British sergeant find themselves together faced by a mob. The Indian officer can fire to disperse it, the sergeant can only fire in self-defence. An illiterate trans-border Indian officer's solution delighted me. His answer was "I should say 'Sergeant sahib, five rounds'!"

THE RECRUITMENT AND INITIAL TRAINING OF RATINGS FOR INDIA'S NAVAL SERVICE.

By " R. I. M. "

India's Naval Service to-day is the Royal Indian Marine. This Service, for a period of over three centuries under various names, has proved itself a very valuable asset to India and the British Empire in Eastern waters. The efficiency of any Navy must be gauged by the competency and morale of its personnel; no excellence of design, high speed or most modern armament can mitigate a lack of these two vital factors. It will therefore be of interest to examine by what means high tone and capability can be introduced and maintained in the Royal Indian Marine. There are many points which have an important bearing on this problem, all of which must be carefully examined; in the first place we must determine what material is available for our purpose; secondly, whether such material can be trained to fulfil that purpose.

In considering a sea service, it would be unwise to look for parallels on land. Though the Army is faced with a somewhat similar problem in obtaining its personnel, the environment of a soldier throughout his service is almost entirely spent on his natural element, the land, whereas a sailor must accustom himself to a life, limited to the confines of a ship, restricted and isolated by the sea. For service at sea, the personnel must be caught young as it is only by actually growing up in ships that men can be brought to look upon the sea as their calling, and their ship as their home; by being so brought up to ship life from their youth they will cheerfully undergo hardships and privations that would deter an older man.

It must therefore be the duty of any Maritime Nation, in order that there may be no lack of those willing to go to sea, to stimulate the interest of its population in sea life, and make such life attractive to its youth. Certain nations are more fortunate than others in this respect. Those who, through the centuries, have had large seagoing populations find no difficulty; others, who in the past, have neglected intercourse with the outer world or who have been content to use the facilities for trade offered by other seafaring nations, find the problem more difficult. For a Naval and fighting service, however, a nation must not only obtain youths who are willing to make the sea their

profession, but it must also find types which have martial instincts, who are able to receive technical instruction in the art of war and who will submit themselves cheerfully and loyally to rigorous discipline. Such material can only be produced if recruited young and given systematic and progressive training from the time of joining the Service.

How, then, is India placed in this respect? Can such material be found, and if so, where? Let us see how the problem has been tackled, and with what success.

Turning back to past history we find that when the ships of the John Company first visited Surat, their crews were entirely British, but it appears that soon after a permanent fighting Squadron was formed, a proportion of the crews were Indian. It is interesting to note that in the eighteenth century certain ships of the Royal Squadron in Eastern waters were partially manned by Indians. The "Monmouth" which fought so doggedly under Hughes in action with "Suffeen" off the Coromandel coast, carried a large percentage of Indian seamen, and small sailing craft of all sorts of the Bombay Marine were in many cases manned entirely by Indian personnel. Most of these men came from the Konkan and Surat Districts on the west coast of India where the best deep sea seamen were to be found. They were of a mixed strain—partly Maratha, partly Arab—and some claimed an Abyssinian descent. During the eighteenth and nineteenth centuries, men of these races were impressed for service by the Maratha pirates.

Up to the Great War, the supply and quality from these districts met the requirements of the Royal Indian Marine. During the War, the large calls made by the Indian Overseas Expedition, plus the increasing demand of the Mercantile Marine, caused the whole area to be heavily over recruited, as the result of which a rapid deterioration in physique and stamina of recruits caused a serious shortage in the personnel of the Royal Indian Marine. In 1928, when the re-institution of the Royal Indian Marine as a combatant service was in progress, a careful examination was made of the Indian seaboard with a view to finding a recruiting ground which would meet the more exacting requirements of the Service.

Ultimately it was decided to investigate the Northern Punjab with a view to recruiting a type well proved in military service. It

was considered that if boys from this District were entered young enough and given a thorough Naval education in the Training Ship at Bombay, it should be possible to produce excellent young seamen for Naval service. It was not intended to abandon entirely the west coast of India as a recruiting source, but it was made clear that, in future, recruits would have to comply with the new physical and educational standards which were necessarily high.

Considerable 'spade work' was necessary, as outside the Konkan and maritime cities, the Indian Marine was very little known. As a beginning, a small batch of *Punjabi Mussulmans* of the average age of 16 years was recruited in Bombay, and proved to be excellent material, being of good physique, keen, and intelligent. Six months later, all parts of the Punjab were visited by an organised Recruiting Party from Bombay; the best response, however, was found in the extreme Northern Punjab where recruits came forward in large numbers. Great assistance was given by the Civil and Military authorities. Since then, recruiting tours have been carried out by Indian Marine Officers in accordance with the requirements of the Service, with the most encouraging results. The boys themselves, returning home on leave have proved to be the best recruiting agents; their rapid development, both mental and physical, has demonstrated to the people of the Northern Punjab that the Royal Indian Marine training produces a type of which parents may reasonably be proud.

The method of recruiting differs somewhat to that of the Army. The Recruiting Officer is always one of the officers of the Training Ship; he, with his staff, personally visits specified places in the area, varying his itinerary slightly from time to time. This has proved very valuable as it has the great advantage of acquainting officers with the general conditions and home life of the boys and men joining the Service. Furthermore, the selection of recruits, subject to prescribed standards, is in the hands of the officers who not only will have to instruct them in the Training Ship, but who, later, will be serving with them afloat. By this means a strong bond of mutual trust and confidence is formed, generating a spirit essential to Naval life.

In the Royal Indian Marine, the first 18 months of a boy's training is spent on board the harbour training ship "*Dalhousie*"; during this time short sea cruises are carried out in the seagoing tender "*Baluchi*". A boy's general education is given prominence in

recruitment and during the whole of his early service. Since the reorganisation of the Service in 1928, it has been found that an illiterate rating suffers a very severe handicap, and the standard of education demanded of recruits is therefore high.

It may be of interest to follow briefly the order of events in the Service life of a boy from the time he is recruited until he is rated Ordinary Seaman, or its equivalent in other branches.

The Recruiting Officer, having notified the Civil and Military authorities in advance, on arriving at a village carries out a preliminary inspection of all applicants, a large percentage of whom are usually of the required standard. He selects a number for the medical and educational test, which is carried out on the spot by the Recruiting Staff, and addresses them on the life at sea in a Naval Service, stressing the more unpleasant features. He then proceeds to select the required quota. Those who are finally selected, having produced their parents' consent, take the Oath of Allegiance, and are enrolled for a period of six years from the age of 18. When on duty the entire Recruiting Party invariably wear uniform.

At the end of the Recruiting Party's tour, all successful boys muster at a central point, such as Jhelum, whence they are despatched to Bombay in charge of the Recruiting Staff. On arrival on board the "Dalhousie" in Bombay, they receive a nucleus uniform kit. The "Dalhousie" carries an instructional and scholastic staff, and boys are organised into terms named after famous British Admirals. The terms are usually 30 to 40 strong, and each term is a self contained unit under its own officer.

The total period of boys' service is two years, the last six months being at sea with the squadron. The initial six months in the training ship are devoted to general training, the elements of seamanship and discipline. A regular curriculum of education in general subjects, including English, is carried out during the whole period in the training ship. All training, both technical and educational is co-ordinated by the Training Officer under the direction of the Captain.

The environment at first is naturally strange to the boys from up country as many have never before seen the sea. The process of settling down, however, does not take long, and before two months are over, with the rarest exceptions, all are making good progress. Each term has its own boy "Petty Officer" and "Leading" boys, so that a sense of responsibility and power of command are learnt at an early age. After six months' general training, the boys are called

upon to volunteer for the branch of the Service,—Seaman, Stoker or Communications—which will be theirs for the whole period of their service. They, then, though remaining in the Training Ship's general organisation, receive instruction in the various training schools situated in the Dockyard. Seamen boys go to the Gunnery School; Stoker boys to the Stokers' Training School or Dockyard Workshops, and the Communication Branch to the Signal School for instruction in Signals or Wireless Telegraphy. Physical training and games play an important part in the general training. Rations are good, the development of boys is rapid, and the first seeds of morale are sown.

Boys who have made good progress, are, on completion of one year in the Training Ship, granted one month's special leave to their homes; this concession is very much appreciated as short leave in Bombay is necessarily rare. It is a great pleasure to meet these boys in their villages and to note their bearing and conduct. They are one and all proud of their Service and their uniform.

The final six months in the Training Ship are of great importance as they are terminated by examinations in which boys qualify for their rating as Ordinary Seamen, or its equivalent in other branches. Many of those about to leave hold unofficial rates as Boy Petty Officer or Leading Boy, and the general tone of the Training Ship is largely in these picked boys' hands.

At last the great day comes when they are to be drafted to their first seagoing ship afloat. Their uniform is now complete, finally inspected and their kit bags are ready to be passed over the side into the waiting cutter. They are fallen in on the Quarter Deck to hear what the Captain will say regarding their past 18 months' training, and their future. He does not dwell much on the past, but does show them that they have been trained with one object in view and that is, to go to sea in India's ships as boys of whom India and the Empire may be proud. He points out that only by unswerving loyalty to their King and Service and high sense of discipline can they prove themselves worthy to serve under the White Ensign.

It is a ceremony which I have had the privilege of witnessing on several occasions and one which I feel sure would breed confidence and pride in any onlooker. The bearing of the boys is alert, they are in the pink of condition, eager, bright-eyed; they have passed the threshold now and are about to enter upon a life in which they will be tried to the utmost, their morale and stamina put to the test,

THE PERIMETER WALL.

BY LT.-COL. H. S. I. PEARSON.

Much has been suggested and experimented with in order to obtain greater mobility on the Frontier. The main conclusion reached as a result of experiment last year is that the best method of increasing the mobility of the soldier in order to enable him to compete on more equal terms with that most mobile enemy, the trans-border tribesmen, is to adopt the policy of "move light and sit heavy." The two main objects of this policy are to lighten the load carried on the man, and to dock the tail of a column by decreasing the amount of transport hitherto considered essential. Both of these objects have undoubtedly to a considerable extent been achieved, and increased mobility is apparent both in the case of the soldier on the hills and the speed of the column in the valley.

This article is written with the intention of considering whether it is not possible to utilize the two degrees of mobility mentioned above in order to obtain yet a third degree, the lengthening of the day's march. The normal day's march off a main road unopposed or against mild opposition has been proved by experience to be from 8 to 10 miles.

The two main factors, apart from hostile opposition, which restrict the length of a march are :—

- (a) Piquetting, and
- (b) The necessity of arriving in Camp with sufficient hours of daylight in hand to build a perimeter.

(a) Piquetting will be with us as long as Frontier Warfare exists and need not be considered except in so far as to mention that the lightening of the load carried by the soldier has undoubtedly speeded up piquetting to a marked degree.

(b) The construction of a perimeter camp has been a feature of Frontier Warfare since the early days of this form of warfare. That it was absolutely essential in the past goes without saying. It is suggested that the time has come to consider whether the continuance of this form of defence is worth the loss of mobility, labour, and fatigue to the soldier involved.

Why do we build a perimeter camp ?

The answer seems to lie under three headings for protection :—

(a) Against an assault on the camp.

(b) Against the Sniper.

(c) Against the rifle thief.

Enquiries from individuals experienced in Frontier Warfare have disclosed a doubt as to whether the tribesmen will ever again carry out an assault on a column camp. That he adopted this method on occasions in the past was due in the main to the paucity and inferiority of his firearms, and a consequent tendency on his part to come to grips with the sword and knife in the use of which he was an expert. Other factors which encouraged him to attempt to close were the lack on our part of automatic weapons and means of illumination, and the inefficacy of rifle fire in the dark. Analogous situations were the charge of the Zulu Impis at Isalndwana and the Dervishes at Omdurman, armed with the spear, whose only chance of victory was to close and fight on equal terms.

The increase in efficiency and number of rifles in the hands of the tribesmen (which tends to make him fight at a greater distance), and the increased stopping power of the modern column due to Automatic Weapons, Very Lights and Grenades make it doubtful whether the tribesmen will again stake his all on a night assault on a column in Camp. But the possibility remains that he may do so, and we have now to consider whether the perimeter camp is the most efficient method of protection against this form of attack, or whether another form of protection may not be equally or more efficacious without possessing the disadvantage of expenditure of time in construction and consequent loss of mobility.

The night assault depends almost entirely on surprise and the ability to approach within assaulting distance of the perimeter undetected. Once this is achieved it seems to matter very little whether a perimeter exists or not as the latter offers practically no obstacle to an able bodied man. The very nature of the perimeter, with no outlying defences apart from the camp piquets, facilitates an advance covered in many cases from the view of the sentries; while the enemy is emboldened by the knowledge that, once his job is done, he can make his 'get away' with no fear of encountering further opposition on his line of retreat. If these arguments are accepted, then it follows

that the perimeter is of very little use against a night assault and from this point of view seems not worth the time sacrificed in erecting it.

On the other hand the construction of a ring of small posts round the camp, the strength and numbers depending on the ground and size of the camp, appears to offer adequate protection against surprise. If these posts are further strengthened by night lines of machine gun fire the attacker would be confronted with a formidable barrier on his line of advance and also on his retreat, supposing his assault had penetrated the defence. The erection of these posts and the construction of lying down head cover immediately round the camp, if considered necessary against any shooting by the enemy before his assault or to demarcate a line of defence, would occupy a very small portion of the time necessary to build an efficient perimeter wall.

It may be taken that the construction of an adequate perimeter seldom takes less than four hours. The construction of the defences suggested instead of a perimeter wall would take an hour to an hour and a half. This means an increase in the time at the disposal of the Commander of a Column of from $2\frac{1}{2}$ to 3 hours, or an increase in the day's march of about five miles, a substantial increase in mobility.

It should be clearly understood that these suggestions are only intended to apply to camps of a column engaged in active operations, not to permanent camps on lines of communication where the perimeter and wire enable a smaller garrison to be maintained and into which the question of mobility does not enter.

(2) and (3) *The Sniper and the rifle thief.*

I think it will be agreed that the perimeter wall affords very little, if any, protection against the sniper. He delights to drop his bullet at as great an angle as possible into the camp and therefore snipes at a reasonably long range in order to attain his object. The method of digging down within the camp has been found to be the most adequate form of protection against this annoyance.

To the rifle thief, the perimeter affords little obstacle, but the fact that he has to surmount it undoubtedly increases his chances of being observed and it therefore affords considerable protection against his ingress.

To sum up briefly the points for consideration are :—

- (a) Are the advantages derived from the construction of perimeter camps in the present form sufficiently strong to warrant their further retention in the future ? or
 - (b) Are the advantages of enhanced mobility and the saving of fatigue to the troops, which will be derived from the discontinuance of the perimeter wall, sufficient to outweigh such virtues of passive defence as it possesses ?
-

THE LEGEND OF BARIDZAI.

BY "JAMSHED".

In the days of The Great Heartsearching the King's heart was troubled, therefore he summoned the Pirs to assemble unto him at Ihled, the Great City of Roads, and the King commanded,—

"Give Ear. Are not my young men of War apt in all the exercises of the Arena? Have I not spent much treasure even to all the treasure in mine house that their panoplies should be of The Latest, yea all those things which The Wisemen of The West declare are proper thereto? Yet now The Civilites mock, saying The Young men of Thy Household! They cannot talk in our gates with the young men of Kohistan. Resolve me therefore ye wise ones if this be so how this reproach may be removed."

Then the Pir of Baridzai, and he was an old man whose years were long in the land, made answer,—

"Oh, Great Lord of War, it is so and chiefly becos' the young-men's minds are darkened with false suppositions and perverse practices. Verily this reproach shall not be removed until thou hast endued them with a new faith. Now therefore I pray thee purge their minds of all reverence for the burnt offerings of The Westernfront and all seekings after The Fleshpots of Flanders, yea even those of Syria and The Later Mesopotamia, and make for them a doctrine such as our fathers believed. As the creed for this doctrine teach to them: We Believe,—The soldiery which cannot on a basis of equality outmanœuvre and outfight the Wildmen, yea, even in their own mountains, deserts or forests, lacketh training.

The Wildmen be wily and fierce yet it is ever their country which to us is more formidable than their men.

Whosoever endeavoureth to cover his lack of skill in the use of material by increasing its mass, he shall waste his substance to little profit; such prevail not against the Wildmen.

The Presence of Superfluous Power, yea even at the Decisive Point, is proof not of Wisdom but of Waste.

If the strength of our foe be geographically dispersed, and he be naturally prone to individualistic objectives, then must the power

which we devise to meet him be capable of The Maximum of Dispersion. Since none but The Almighty Spirit can be in two places at the same time the essence of Dispersion is Numbers. The limitation of Numbers is Cost.

When the young men draw together in leaguers, or otherwise congregate for a period, then is much care required lest they be smitten with pestilences, particular so if the period be long and the watching devoid of profit.

When however the young men move daily over the mountains to fresh ground, then can they, and the Elders of the Tribes drink of the streams thereof, even quench their thirst at the ponds and very cess-pools of the country, and their bowels shall not be troubled, save there be natural salts in the waters of the land ; so also will they take no harm if for a period they have no canopy by day or night except that of Heaven. If they have by daily measure two pounds of flesh and flour and of drink sufficiency in accordance with the temperatures then shall we find men, Fighting Fit even at the end of thirty days, though they move many leagues daily over the mountains. These things be true for all the Tribes of Atkinses, as for the tribes of the Outer Realm they will think they have fared sumptuously.

The Underestimate of an Enemy cometh from folly but his Undue Exaltation out of ignorance and cowardice.

Conforming to The Enemy is Weakness but in Learning from The Enemy is Wisdom.

From the offering of Battle may come profit but from The Forcing thereof cometh Success."

Having hearkened patiently to the words of the Pir, The King's Majesty decreed :—

"Belike whosoever shall rightly and faithfully believe this Creed to him shall riddles such as this riddle of Kohistan be no riddle and his slumbers shall not be vexed by visions wherein The Dogs of War are wagged by their tails. Nevertheless to the further confirming of faith and for the edification of the young shall the Pir of Baridzai write for me thereon a catechism, which shall pertain peculiarly to this matter of Kohistan."

The Pir of Baridzai made obeisance and answer saying "Great King I am Thy servant". Having returned home and pondered awhile he wrote :—

The Catechism for Kohistan.

Q. 1 What understand ye by Mobility ? A matter of diverse forms but in essence Ability in War to reach all necessary places. Among mountains therefore is the mule more mobile than the motor and man more mobile than the mule. Note how the hill folk when they would move secretly and swiftly, as in war, use for portorage not their oxen, asses or camels, tho' they often be many and very apt in the passage of steep and rough places, but their elder women and boys.

Q. 2. What know ye of vallies and ridges ?

A. I know that every ridge commands two vallies, while each valley is dominated by two ridges. Further that in hill country the shortest approach between two points lies commonly along the crest of ridges ; therefore do the hill folk make thereon the highways of daily life and do, naturally, use the same in war.

Q. 3. There be some who believe that the men of Kohistan are possessed of Devils, and so can ascend more swiftly than birds from the valley bottoms to the hill tops, and thus they are able to smite our soldiers grievously in the rear. Do you believe this ?

A. Nay, they are mortals and this is but a seeming ; sometimes it is that they have lain hidden close below knowing our young men will not go down beyond the crest line ; more commonly because in steep and winding glens one strolling along a contour can appear suddenly far above one who has run fast along the winding stream line and this seemeth to the runner a miraculous climb from his level, the more so since the short contour lines are often for a long space dead to both Piqueteer above and Rearguarder beneath.

Q. 4. What think ye about Fire and Movement in Kohistan ?

A. When a foe is weak in material there is no profit in dawdling around collecting superfluous fire power while he expends such amount of his material as appears good to him before moving off. The text then proper to the heart of everyman is " Gallop 'em. Gallop 'em ".

If a foe be wily and agile then must we be quicker or cleverer than he to get value for material expended.

Fire one round at a Kohistan before he see thee, then even though thou miss him and inwardly he is glad, blessing Fate, yet will he respect thee greatly; plain for all the world to see plaster the hill sides prophylactically with a ton of lead, then even though by Fortune ye slay one or two will the whole parish laugh and the tale of thy ineffectiveness spread across the hills.

Q. 5. It hath been written that the warriors of Kohistan will slay a foe at five furlongs if he show but his head, moreover, if their foe deviate by a fraction from Perfection then will every Kohistani within reach instantly and collectively take advantage thereof. What think ye?

A. Things difficult to believe.

We know that we have eyes, not dissimilar to theirs and ears to listen to the Voice of Instruction, together with much time and material for practice, and yet the most skilled of us find it difficult to "Keep on The Bullseye" at half the distance on a Faire Butte, and that Intelligence, Initiative and Co-operation are things hard of attainment. How then should the ill-provided, untutored, and ill-organised attain to such skill unless indeed there be some in Kohistan with a power as wonderful as that of any Wizard in Our Fairy Tales. It would be worth the while of any King to pay a King's Ransom for the Secret, yet no Kohistani has been known ever to profess to such power, and they are an avaricious folk. It is therefore easier to believe that the alleged facts are the illusions of those too blind to see from whence they are really being Shot up or too careless to recognise how often it was a case of A Gift but, No Takers.

Q. 6. It has been taught that since the forces of Kohistan have no Lines of Communication they cannot be forced to Battle.

Do you deem this truth?

A. Nay, though it is a plausible heresay.

It is true that their Ordinance is so meagre that often individuals carry all their echelons thereof upon the man,

and their Supply Service so embryonic that it is impossible for them to concentrate for long any great proportion of their fighting strength. Natheless Kohistanis have bellies to be filled and bodies to be kept warm, therefore the observant may note even within sight of the Camp Picquets, the torches of the women's convoy, the hearths still warm, and the furrow turned against the next sowing, the Bold and Inquisitive may find the grain, and even the ammunition box cached beneath the floor, or in the side nullah, and they be permitted to move more rapidly and less formally than The Lord-Mayor's Show, the flocks and herds just round the corner. Touch such things effectively and if ye get not your bellyfull of fighting ye will, as elsewhere, win quick surrender.

Q. 7. There be many who hold that with these Chariots of Fire that move swiftly over the ground crawling like caterpillars through the uneven places we may so girdle the Hill Folk that the realm have peace, and many of our youth, saved from the risk of sweat and wounds, live productively. Do ye so hope?

A. Truly these with those which fly like falcons be engines of great power, and have their uses, but for diverse reasons we think they will not alone 'Fill the Bill.'

Take heed particularly they are costly. The Hill Folk are weak in material but numerous and elusive, therefore in the concentrated power of these engines is ever inherent the risk of Superfluous Power at some places, while in their Cost through Limitations of Numbers, and consequent low Power of Dispersion that of the lack of adequate strength at another, results contrary to our Creed.

Q. 8. What then would you make the basis of the Ordering of Batailles in Kohistan?

A. Firstly that there be a sufficiency of footmen, and they mentally and physically capable of operating on Their Own; equipped with such things only as can be carried readily by man across the mountains.

Secondly that when the expediency of joining ought else to them is considered the matter be determined strictly on the principle that it addeth to the Offensive Power

of the footmen in a measure necessary to their task.
That a thing increases protection to the Footmen shall
be deemed of small account ; that it must be protected
by the footmen one of much moment.

Q. 9. What deem ye the Moral Graces which should sustain the
soldier for Kohistan ?

A. He is not mentally oppressed by the Mountains.

He desireth to act justly on his own not craving the
constant countenance of overseers.

He feareth not the Darkness believing that though Day-
light favoureth the more skilled at arms, Night helpeth
the stouter-heart.

He feeleth that the warrior who in aught hath sufficiency
hath abundance.

He believeth that the Kohistani attacking is A Gift to Skill
at Arms, but the Kohistani attacked unprepared is indeed
Easy Meat.

Q. 10. By what outward signs may ye know of this moral Grace
in the Young man.

Assigned a task he moveth with alacrity and pursueth it
without constant direction by the centurions.

In the dark he handleth his equipment with precision and
moveth silently.

He noteth all that moveth within four furlongs of him.

He expendeth not his missiles until he seeth his enemy, or
is otherwise assured of his position, and then useth them
justly.

In ascending and descending of hills he choeth readily the
fittest way.

Though starting before dawn he has moved over the hills
until the tenth hour of the day, he still with zeal will
ascend a thousand cubits to clear The Wildmen from a
hill top, and directed to lie out thereon he merely grouseth
in the proper measure.

So long as there be fighting he craveth of meat and drink
only sufficient to keeping him going.

Q. 11. Though Moral Grace will prevail over material difficulties, by what material aids would you seek to increase his efficiency ?

A. We should so endeavour that,—

He is shod with cotton or with crepe and not like our draught bullocks with iron, lest more clumsily than a bullock he stumble on the hills by day and crash along the nullah at night.

Naught in his equipment, swinging loose impede him ascending, descending, or crawling among rocks, or constrict ankle, knee or chest.

His vestments be woven of the hair of sheep or goats and not of cotton, so that he chill not on the hill tops, also in the days of rain a surcoat which will keep those vestments dry.

He carry an arme blanche wherewith he may meet a skin coated six foot man, wielding a three foot knife on fair terms.

Q. 12. What Hopes have ye for those who believe and practice our Faith ?

A. Surely they shall toy with the young men of Kohistan, and if we need them elsewhere then shall we still find our Young men Bold and Inquisitive, and our Elders apt in applying material truly to The Offensive.

FARNHAM.**SURREY.**

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LETTERS TO THE EDITOR.**BATTALION REORGANIZATION.**

SIR,

It is suggested that the present tendency is for a battalion to become increasingly overloaded with a multiplicity of weapons and specialists, and as the responsibilities of a battalion commander, both for training in peace and fighting in war, are of greater complexity now than ever before, it is for consideration whether some simplified form of organization could not be evolved.

It is thought by some that "support" battalions might be introduced, and that the infantry battalion should consist only of rifles and light automatics, but this is open to two major objections. In the first place decentralisation would be necessary during operations, and consequently the infantry battalion commander would have to deal with just as many subordinate commanders—who would attend conferences and receive verbal orders—as under the present organization. The problem of command would not therefore be simplified; it would in fact be complicated by lack of mutual knowledge and combined training. Secondly, in order to meet the difficulties inherent in trooping and drafts, it might be necessary for both battalions of the same regiment to be converted simultaneously into "support" battalions. Further this organisation would not suit conditions of service abroad in that "support" battalions might have to remain permanently at home, with the consequent disadvantage that a class of soldier would develop without experience of foreign service.

Under the present organisation an infantry battalion commander may be accompanied by as many as three rifle company commanders, a machine gun company commander, the anti-tank and mortar platoon commanders, the intelligence and signal officers, possibly attached R. A. and Tank officers, and his adjutant. Each of these would in turn be followed by an orderly or runner and, as six subordinates is the accepted maximum with whom a commander should have to deal direct, some measure of reorganisation seems indicated.

It is, therefore, suggested that an infantry battalion should consist of three main divisions consisting of Rifle, Support, and Head-quarter Wings. The first two would be commanded by field officers and the latter by a captain. Under this organisation, which is shewn in the attached diagram, the position of an infantry battalion commander would be analogous to that of an artillery brigade commander. He would train, administer and command his battalion through his wing commanders, whose powers and responsibilities should be proportionately increased. Under such an organisation the battalion is capable of any degree of centralised or decentralised employment that may be necessary. It has, moreover, the great advantage that the various arms composing a battalion can train and work together, while the battalion commander would be relieved of much administrative detail and would thus be free to concentrate on training and fighting.

A periodical turn-over is essential in order to ensure the maintenance of at least a partially trained reserve. A permanent fixed minimum could be decided upon and such personnel would remain throughout their service in the support wing, the remainder being turned over periodically. A certain number of soldiers, for one reason or another, would never serve in the support wing, and their numbers could easily be made to balance the permanent fixed minimum referred to above.

It remains for consideration whether this organisation would add to the present difficulties of the trooping question. Vickers Guns and Mortars, which at present only exist in theory, would certainly be required abroad, and with slight modification these could be carried on pack. As regards anti-tank guns these may or may not be required and, if not, then the personnel manning this weapon at home could serve abroad in the rifle wing. In peace they could be made to represent these weapons on training, and on mobilisation they could form part of the first reinforcements left at the base. Should it be necessary for A. T. Guns to be employed, the personnel and organisation to receive them is available.

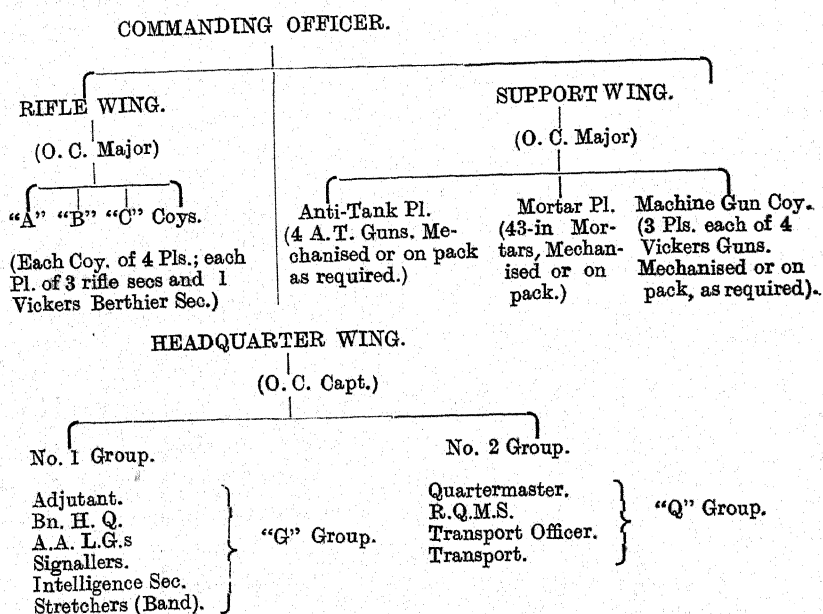
The Cardwell system remains unaffected by these changes and drafts of soldiers from both the rifle and support wings would continue to be sent abroad and could serve in either wing as required, subject to the permanent fixed minimum and periodical turn-over.

In conclusion, it is realised that no scheme can be ideal in all respects and, if it is agreed generally that the present organisation is not satisfactory, then the above suggestions are put forward, in bare outline, with the object of stimulating thought on this subject. It is claimed that the scheme has the advantage of lessening the difficulties of command from the infantry battalion point of view in regard to training, fighting, and administration. It should simplify tactical handling, and at the same time tend to maintain a reasonable standard of efficiency in the personnel of the specialist weapons.

Yours faithfully,

"SUBALTERN, D.L.I."

Diagram showing the suggested battalion reorganisation.



NOTE.—The majority of the transport animals and vehicles would be under the command of their respective coys. and wings. Hd. Qrs. tpt. would carry Bn. S. A. A. reserve, etc., as decided by the Bn. Comdr.

MILITARY NOTES.

FRANCE.

Reduction of 5,000 Officers.

As one of the measures of economy, the Government recently decided on a reduction of 5,000 army officers, and with this end in view offered special inducements to officers to retire prematurely. Some reluctance on the part of eligible officers to avail themselves of the special conditions for retirement has now become apparent, and the Government has had to circularise G.O.C's. Regions requesting them to draw the attention of officers to the facilities offered for their premature retirement. The circular further states that if the facilities offered do not attract a sufficient number of officers in the time specified, i.e., within 6 months from the promulgation of the Law of 31st May, 1933, other means will have to be found to bring about the necessary reductions. These measures will be applicable to those officers whose military qualifications are not of a high standard.

Military Commands.

By a recent decree a new military command has been created in the territory on the borders of southern Algeria and Morocco.

The commander, who is to be a general or field officer with the title of Military Commander of the Morocco-Algerian Border, will be responsible for security and order over an area in Morocco to be fixed by the Resident General, and over the Ain Sefra territory of Algeria which comprises the "annexe" of Saura and part of the "annexe" of Touat.

It is reported that Colonel Trinquier, at present commanding the *cercle* of Colomb-Béchar, will be appointed to the new command.

FRENCH SOMALILAND.

Military Forces.

The formation at Djibouti of a company of *tirailleurs indigènes* 135 strong has been authorized and, together with the aviation detachment (4 machines), will form an independent group no longer, as hitherto, under the command of G.O.C., Madagascar.

The existing native gendarmerie has also been reorganized and now comprises a "foot brigade" and a "camel troop" with a total

strength of 2 officers, 7 European warrant officers and non-commissioned officers and 230 natives.

It will be responsible for policing the interior and frontiers, the protection of communications, and providing escorts and guards for government buildings.

It will be normally directly under the Governor, but in case of emergency will be placed at the disposal of the military authorities.

ITALY.

Pre-military Training.

Under the provisions of a law passed in December, 1930, pre-military training is compulsory for all Italian citizens between the ages of 18 and 21. The complete programme of pre-military training covers two years. The 1st year course occupies 24 days and the 2nd year course 16 days. At the end of each course an examination is held under instructions issued by the Ministry of War, and those who pass out successfully at the end of the second year become entitled to certain alleviations of their term of conscript service.

A recently published manual gives detailed instructions regarding the training to be carried out. Each day's work normally occupies three hours, of which approximately one hour is devoted to physical training and one hour each to theoretical and practical military instruction. Physical training includes the normal types of exercises, elementary gymnastics, running, jumping, hurdling, climbing and various games. Theoretical military instruction is given in the elements of military organization and duties, special attention being devoted to the inculcation of discipline, obedience and morale. Hygiene, personal cleanliness, food and drink, clothing and exercise receive careful consideration with particular reference to the demands made by long marches. Practical military instruction is limited to close order squad and platoon drill, rifle exercises, and marches up to a maximum of 20 miles in length by the end of the 2nd year course. Musketry is voluntary in places where range accommodation is available, but consists only of two practices on a miniature range followed by the firing of 12 rounds at 100 yards.

Reserve Officers from the University Militia.

A recent Army Order deals with last year's courses for cadets of the University Militia who are candidates for appointment to the Reserve of Officers.

First year courses take place between the months of December and April at the Universities and consist of about 30 lectures on military subjects together with a small amount of practical military instruction. Subsequently cadets go through a second year course from July to October at special military cadet schools, during which theoretical and practical instruction is given, including a period of about 40 days spent in camp. On the conclusion of these courses examinations are held and successful candidates are gazetted as Second Lieutenants of Reserve (*di Complimento*).

Civil Mobilization—Food Stuff.

A recently published Royal Decree announces the formation of a special department charged with the duty of organizing the supply and distribution of food stuffs in time of war. The "Civil Mobilization Section of Alimentary Organization," as the new department is called, is to comprise a central office situated at the Ministry of Agriculture and provincial offices located in 12 of the principal cities in the country. The central office will work in close co-operation with the Committee of Civil Mobilization and with other bodies concerned in the organization of the nation in time of war. All offices will be under the direction of invalided officers of the fighting services and personnel will be partly military and partly civil. The expenditure incurred will be borne by the budget of the Ministry of Agriculture.

New Summer Uniform for Officers.

A new white drill undress uniform is to be adopted for officers of the Italian Army. The jacket is of similar pattern to that in use in the British Army and is to be worn with a white shirt with turned down collar and black tie. This uniform may apparently be worn on all occasions except when parading with troops.

Italo-Russian Pact.

A pact between Italy and the U. S. S. R. was signed at Rome on 2nd September. The pact sets out the intention of the two governments to remain neutral in a conflict into which either state may be drawn and pledges them not to act as aggressors against each other.

the term aggressor is, however, not defined. The pact also provides against economic discrimination between the two states and binds each other not to participate in commercial or political agreements calculated to prejudice the other.

PORTUGAL.

Military Commissions.

Two Commissions, composed of senior officers of the different arms, have been appointed to study the question of the purchase of material for the instruction of the army, and to revise the existing laws regulating promotion and retirement in the army.

Budget for 1933-34.

The details of the budget for the financial year 1933-1934 have just been published. This is the sixth annual budget prepared by Dr. Salazar since he took over the reorganisation of the country's finances in 1928, and he appears to have had some difficulty in balancing revenue and expenditure, both of which are increased by 79 million escudos (£767,000), though he has succeeded in obtaining a small surplus of nearly 2 million escudos.

As regards expenditure, the largest increase goes to public works, the vote for this ministry having been raised by 60 million escudos while the Ministry of Marine has also been given a considerable increase of 15 million.

Though there is a small increase of 300,000 escudos in the Military Vote, the amount expended under this heading has shown practically no alteration during the last six years.

Details of the principal items in comparison with 1932-33 are tabulated below:—

Expenditure.

	1933-34.	1932-33.
<i>Ordinary.</i>	Escudos.	Escudos.
Ministry of War	318,737,736	318,435,601
Ministry of Marine	157,090,478	152,998,397
Ministry of Public Works and Communica- tions	292,814,378	236,533,154
Ministry of the Colonies	28,254,918	26,569,833
<i>Extraordinary.</i>		
Ministry of Marine	119,700,000	108,000,000
Ministry of the Colonies .. .. .	..	1,200,000
Total	916,597,510	843,736,985
	£8,898,000	£8,191,600

NOTE.—Current rate of exchange=103 escudos to £1.

TURKEY.

Defence against air attack.

The Turkish Government has recently issued instructions to the local authorities in the principal towns that the protection of inhabitants against gas attack from the air is to be provided by the issue of gas masks and by the construction of underground gas-proof chambers.

Turco-Greek pact.

A Turco-Greek pact was signed at Angora on 14th September. By the terms of the pact Greece and Turkey mutually guarantee the inviolability of their common frontiers, and agree to consult together in all international questions which affect them in order to secure a common line of action. It is also provided that at international conferences at which only one of the two countries is represented the delegate of that country shall defend the common and individual interests of both. The official announcement lays emphasis upon the essentially peaceful motives which underlie the signature of the pact and expresses the hope that it will be extended to include other countries and thus further enduring peace in the Near East.

JAPAN.

General.

The negotiations which have been in progress in Tokio since the end of June for the sale to Manchukuo of Soviet Russia's interest in the Chinese Eastern Railway appear to have reached a deadlock. The chief difficulty seems to be in regard to the price demanded by Russia. This was originally 250 million gold roubles, and subsequently reduced to 200 million. The Manchukuo delegates, on the other hand, have not agreed to raise their suggested purchase price of 50 million yen, which at the present rates of exchange is only about one-tenth of the Soviet's figure.

U. S. A.

Civilian Conservation Corps.

President Roosevelt's plan for employing 275,000 unemployed youths in forestry camps throughout the United States, has now been successfully put into operation by the Army.

Some idea can be formed of the magnitude of the task confronting the Army when it is realised that these 275,000 young men have been enrolled, given physical training to fit them for work, and despatched to 1,500 forest camps established throughout the United States, all within a period of three months. The number of men enrolled in the Corps was later increased to 310,000, including 14,000 Indians.

3,000 Army officers, including a number of reserve officers, have been directly employed with the Civilian Conservation Corps and have received excellent training in handling men.

The task with which the company commander in this Corps was confronted was not an easy one. Though the men had joined the Corps for a period of six months they were free to leave it at any time, they were not subject to military discipline, in fact any form of militarism was expressly excluded in order to avoid offending the feelings of pacifists, and, at first, no provision was made for extra pay for men selected to take charge of squads. The company commanders got over these difficulties by bluff and a discreet disregard of orders. One of them said that he treated his men as soldiers as "the youngsters don't know the difference, and some who are old soldiers realise that it is the best method for all concerned." The power to dismiss men for misconduct enabled the company commanders to get rid of bad characters.

The regular army cooks attached to the corps seem to have been a potent factor in making the scheme a success. Many of the men had been out of employment and under-nourished for months. This fact, aided by physical training and open-air life, gave them enormous appetites. One company commander said "As to the Chow situation, there has never been assembled any group of 200 men who could eat more than a Civilian Conservation Corps Company . . . they started eating on 17th April and are still eating."

The establishment of the forest camps gave the companies a test of endurance. They moved by rail or road from the military stations, where they had been undergoing physical training to condition them for work, to the camp sites in the forests, where they had to do everything for themselves, starting with clearing the camp site of undergrowth in many cases. Overcoming these initial difficulties helped to instil discipline and gave the companies an *esprit de corps*, and the scheme appears now to be running well.

The success with which the scheme is operating is a great credit to the United States Army, and under the care of the Army the young men seem to have adapted themselves readily to new conditions and have settled down to work and discipline.

The original plan was that the corps should only be formed for six months, at the end of which time it was hoped that industry would be ready to absorb its members in regular employment. This plan has now been modified and orders have been issued for its continuance for a further six months from October. All men who can find civilian employment will be discharged and their places taken by new enrolments. As many as possible of the regular officers on duty with the corps will be returned to ordinary duties and replaced by reserve officers.

Owing to severe winter weather 450 of the forest camps will have to be abandoned and new camps established in warmer parts of the country ; at other places wooden huts will have to be built and heating apparatus installed.

The cost of running the Civilian Conservation Corps has been enormous and preparations for the winter will involve further heavy expenditure.

SPAIN.

Recruiting.

A Bill is shortly to be laid before Parliament proposing the amendment of the Recruiting Regulations. It will be based upon the following principles :

- (i) Abolition of the *Cuota* (privileged) class.
- (ii) Compulsory service of 6 months for every male Spaniard.
- (iii) All recruits to take part in the ballot for service in Morocco.

Note.—The *Cuota* class, the numbers of which are limited to 40 per cent. of the total contingent, consists of men who pay a premium and can prove that they have already received instruction at a military school. They are allowed to reduce or postpone their service and are granted numerous other privileges, one of which is exemption from service in Morocco. They numbered 12,124 in 1932.

Industrial Mobilization.

With a view to preparing specialized technical personnel for industrial mobilization, and order authorizes the War Minister to appoint:—

1. Such artillery officers as he considers advisable to gain experience in the various military factories which form the *Consortio de Industrias Militares* (a group of seven armament and explosive factories).
2. Civil industrial engineers (at the proposal of the Minister of Agriculture, Commerce and Industry) up to 50 per cent. of the technical workshop personnel of these factories.

SYRIA.

Development of Port of Beyrouth.

Plans for the enlargement of the Port of Beyrouth, together with the establishment of a free zone for the transport of goods to Iraq and Persia, are rapidly being put into execution so as to be able to compete with the superior facilities which will be offered at the Palestinian port of Haifa when the new port there is opened.

Over three and a half million francs have already been allotted for the work, which includes lengthening the landing quay by 200 metres and establishing a free zone.

NORWAY.

Notes on the Army Reorganization Scheme.

The proposals outlined below have been passed by the "Storting" and are to come into force in the summer of 1934.

*Liability for Service.**A. — Old Organization.*

Hitherto the periods of liability have been as follows:—

Age 18—20	in the	"Landstorm."
„ 20—32	„	"Line."
„ 32—44	„	"Landvern" (militia).
„ 44—55	„	"Landstorm."

The "Landvern" cannot be employed outside Norway without the consent of the "Storting."

The "Landstorm" can only be mobilized in the event of war or menace of war.

B.—New Organization.

Under the new proposals conscripts will do 16 years in the Line and 8 in the "Landvern."

Service with the Colours.

A.—Old Organization.

At present conscripts do—

- (1) *Recruit training.*—60 to 90 days (according to arm of service) in the Recruit Schools.
- (2) *Regimental training.*—Repetition courses of 24 days each with units in the 1st and 3rd or 2nd and 4th years of Line service.

B.—New Organization.

Under the new organization men of all arms alike will do a single period of 84 days' training, except that—

- (1) Men in anti-aircraft artillery units will do 70 days in the first year and 14 days in the second.
- (2) Men in the Air Service will do 30 days' recruit training and three repetition trainings of 30 days each.
- (3) Men in the Guards, the Garrison Company at Kirkenes, and the garrison of the Fossum defences will do 6 months' continuous service.
- (4) The obligation for men of higher educational standards to serve for 6 months is to be extended so far as necessary to provide sufficient junior non-commissioned officers.

Under this system the Recruit Schools will be taken over by regimental staffs, who will thus train the conscript throughout his 84 days' service, commencing with recruit training and concluding with field training.

Small winter Recruit Schools (30 men per regiment called up for service in the winter) are to be run to provide troops for demonstration purposes for training officers and non-commissioned officers.

No fixed liability for repetition courses is laid down, but the "Storting" can always authorize the calling up of annual classes to be specified at the time, for 24 days' repetition training or for manœuvres or for both, whenever the necessary financial provision can be made in the Budget.

Officers and Non-commissioned Officers.

A.—Old Organization.

The officers and non-commissioned officers, together styled "Befal," consist at present of the following categories:—

1. *Regular "Befal."*

(a) *Garrison "Befal"*—i.e., regular whole-time personnel consisting of—

- (i) *Officers*.—Recruited from the Cadet School (a 3-years' course).
- (ii) *Non-commissioned officers*.—Recruited as boys and trained at the Non-commissioned Officers' Schools of their respective arms (3 years' training).

(b) *District "Befal."*—Personnel recruited and trained in the same way as the Garrison "Befal," but employed and paid only during training periods, with an annual retaining fee in addition. Captains and subalterns are constantly changed from "Garrison" to "District" appointments and *vice versa*, but all above the rank of captain are "Garrison" officers: Garrison and District non-commissioned officers are similarly interchangeable.

2. *Reserve "Befal."*

(a) *Officers*.—One year at the Cadet School, followed by the ordinary recruits' training and seven regimental trainings: appointed as serjeants for the recruits' training and first regimental training, commissioned as second lieutenants during second regimental training.

(b) *Non-commissioned officers*.—Three years at Non-commissioned Officers' Schools (these schools give a good civil, as well as a military, education), followed by two recruits' trainings and two or three regimental trainings according to arm of service.

Reserve "Befal" are paid only whilst actually on training.

3. *Enlisted "Befal."*

Junior non-commissioned officers selected from the ordinary conscripts. Men of higher educational qualifications may by law be

retained for 180 days with the Colours, but at present this obligation is only imposed on students of the Technical High School and medical, dental and veterinary students.

B.—New Organization.

1. Under the new organization the number of "Garrison" officers will be reduced and the category of "District Befal" is to be abolished. The additional officers and non-commissioned officers required during training periods correspond to the present Reserve "Befal" and will be known as Conscript Paid "Befal." The training of officers and non-commissioned officers is to be assimilated, both Garrison and Conscript Paid "Befal" commencing their careers in the "Befal" Schools (the present non-commissioned officers' schools of the various arms). The Garrison "Befal" will consist of officers only. In order to provide for the requirements in non-commissioned officers for repetition training, manœuvres, or on mobilization, the number of Enlisted "Befal" is to be increased.

2. "*Befal*" Schools.—Every candidate for the Garrison or Conscript Paid "Befal" will spend a year at a "Befal" School, during which he is to attend recruit and regimental training. Those of a lower standard of education will spend 3 years in all at the "Befal" School, during the first two of which they receive a civil education.

There are :—

6 Infantry "Befal" Schools (1 per division).

1 Cavalry "Befal" School.

1 Artillery "Befal" School.

1 Engineer "Befal" School.

3. *Categories of "Befal."*

(a) *Garrison "Befal."*—On passing out of the "Befal" School, the candidate for the Garrison "Befal" will spend two years as a cadet at the Military Cadet School. He will leave this with the rank of ensign, from which he will be promoted in due course to lieutenant. Candidates for regular administrative appointments who are normally men of a different class, will leave the "Befal" Schools as serjeant-majors and go to the Administrative School, from which they will receive commissions as subalterns.

The number of Garrison "Befal" is to be 668.

(b) *Conscript Paid "Befal."*—Members of the Conscript Paid "Befal" will leave the "Befal" Schools as serjeants. They are to receive subsequent promotion up to, but not beyond, the rank of major. They are to be called to the Colours every year for the training periods, during which they will receive a daily rate of pay : in addition they are to be given an annual retaining fee.

The number of Conscript Paid "Befal" is to be 1,159.

(c) *Enlisted "Befal."*—In order to provide for requirements on repetition training, manœuvres and mobilization, the legal obligation for better educated men to serve for 180 days is to be applied to individuals additional to those specified in paragraph A. 3 above, who are fitted to receive training as non-commissioned officers.

Normally those individuals will do 60 days in each of the first and second years of their service, and the remaining 60 days will be divided up as may be found expedient. Personnel in the Guards, in the Kirkenes Company, and in the garrison of the Fossum Defences will do their 180 days in one continuous period, while those in the Commissariat will do 84 days in the first year and 96 days in the second.

Army Organization and Mobilization.

The army consists in peace of 6 divisions, but the only units permanently in being are the Guards Battalion, the Garrison Company in Kirkenes, and the garrison of the Fossum Defences. All coast defences are in future to be manned by the Navy.

The system may be illustrated by an explanation of the infantry organization : it applies also to the other arms. An infantry regiment comprises three Line battalions, which however normally only exist on paper, the permanent cadre of the regiment consisting only of 9 Garrison "Befal." During the annual recruits' training, the regiment receives an addition of 34 Conscript Paid "Befal," and the recruits are formed into a specially constituted training battalion, though each man is nominally posted to one or another of the three Line battalions.

Mobilization can then if necessary take place in two phases :—

1. *Mobilization of the Neutrality Guard.*—A covering force comprising army troops and six mixed brigades (one formed by each division) composed each of three battalions, a field artillery group and other units. The Neutrality Guard

consists of the training battalions, &c., which are brought up to strength by the most recent annual classes of trained men and are converted into service battalions. Thus the personnel of these units do not mobilize with the Line battalions, &c., to which they nominally belong.

2. *Mobilization of the six divisions.*—These are mobilized entirely independently of and in addition to the Neutrality Guard, the Line battalions, &c., being formed from the remaining classes of trained men in the Line. The increase from 12 to 16 years' service in the Line is designed to provide the necessary personnel for this expansion.

It is clear that the preliminary mobilization of the Neutrality Guard is not an essential part of the scheme. The six divisions can be mobilized alone; in that case personnel serving at the time with the training units, &c., would be mobilized with the Line battalions, &c., to which they belong. Presumably only 12 of the 16 annual classes in the Line would then be required to bring the Line units up to strength.

Similarly for manœuvres or repetition training the training battalion would not be constituted as a unit, but recruits would go to such of the Line battalions as were called out.

REVIEWS.

The Military Engineer in India, Volume I.

BY LT.-COL. E. W. C. SANDES, D.S.O., M.C., R.E. (RETD.).

(*The Institution of Royal Engineers, Chatham, 1933*) s. 25/-.

For many years there has existed amongst students of India generally, and amongst engineers in particular, a widespread feeling that some account should be available of the part which the military engineer has played in the building up of India. The opening up of great continents, such as North America and India, has inevitably depended much upon Army engineers for the gradual absorption of such lands into the zone of settled civilization. This phase has had to follow military conquest with the result that engineering has had to be undertaken in conditions unsuitable to the civil engineer. The activities and characteristics of British military engineers have thus had a great influence in the moulding of modern India just as those of the American Army have had upon the development of the U.S.A. The possession of an account of such activities and characteristics is a matter of some historical importance and it is this want which Colonel Sandes has attempted to meet.

The author has divided his history into two volumes, the first, which is reviewed here, dealing with the purely military aspect of engineering in the last three centuries, while Volume II, to appear in due course, will cover the civil activities of the military engineer in India.

The present volume contains 25 photographic illustrations, including portraits of famous men and pictures of famous incidents from the storming of the Kabul Gate at Ghazni to the crossing of the Shumran Band in 1916. It also contains 18 maps and plans of considerable interest and value.

The author claims to have produced "a readable story rather than a precise and exhausting record." The book is certainly readable and nowhere exhausting but the amount of ground to be covered was so vast that even in the 555 pages available here it was impossible for the account *not* to read more as a record than a story. Nevertheless it is a work of the greatest value, and officers should feel thankful that some one was willing to undertake the immense amount of reading and research entailed in the production of such a record.

There is inevitably considerable space allotted to general Indian military history, into which the account of the doings of engineers is skilfully woven. The author commences by tracing the earliest efforts at military engineering in the beginnings of Madras, Calcutta and Bombay in the 17th and early 18th centuries. He tells of the first formation of the Sapper and Pioneer Corps and follows their activities through the Mysore and Mahratta wars (1780 to 1819). He records faithfully their expansions and their influence upon the course of the Burma, Chinese, Sikh and 1st Afghan wars. The operations at Delhi in the Mutiny come in for special treatment because in these operations engineers had the lion's share and bore much responsibility. Continuing through the 2nd Afghan and Burmese wars, Colonel Sandes comes to the Great War period, of which an excellent summary of India's engineering effort in all theatres is given. Ending with the recent Khajuri and Burma operations and the reorganization of the Sapper and Miner Corps, the book is right up to date.

This volume will prove an invaluable book of reference which should find a home in every Library.

B. C. D.

Armaments Year Book, 1933.

(LEAGUE OF NATIONS, GENEVA).

(*Thacker & Co., Ltd., Bombay, Rs. 15/-.*)

This is the ninth edition of the Armaments Year Book, compiled by the Secretariat and published under the authority of the Council of the League of Nations. It contains monographs on sixty-four countries—members and non-members of the League, and it is claimed for the present volume that account has been taken of all important changes in the military organization of the different countries up till May 1933.

The heading to each monograph contains figures relating to the area, population, density and railway systems of the country dealt with, followed by chapters on the Army, Air Force, Navy and Expenditure on National Defence. The chapter on the Army furnishes useful information regarding the main characteristics of the land forces, including the general organization, control, composition, system of recruitment, territorial areas, and the number of effectives. For the Air Force, in cases where it is organized as an independent arm, the arrangement follows that for the army, while the Naval

chapter refers to the various categories of warships possessed or building, the names of ships, their displacement, armament, motive power, age, etc., together with information regarding naval ports, arsenals, bases and effectives. Each monograph closes with a table purporting to show the expenditure on national defence during the past five or six years, but as the figures are based on different systems of calculation it is not possible to compare the relative budget expenditure for the different powers.

The book has two appendices : the first relates to the Conventions, Treaties and Agreements concluded between the different countries from 1817 to 1931 : the second contains statistical tables and graphs showing the male population of each country by age groups, world expenditure on armaments, etc. At the end of the volume the reader will find a bibliography indicating the various documents consulted in its preparation.

The Year Book is an improvement on the previous editions and in spite of its size—1,048 pages—the military student, especially officers studying for the Staff College Examinations, will find it to be a most useful reference book containing in a single volume information and figures relating to the armed forces of the world not readily accessible elsewhere.

L. H.

The Staff College Examination Lecture Series.

BY BREV. LT.-COL. B. C. DENING, M.C., R.E., P.S.C.

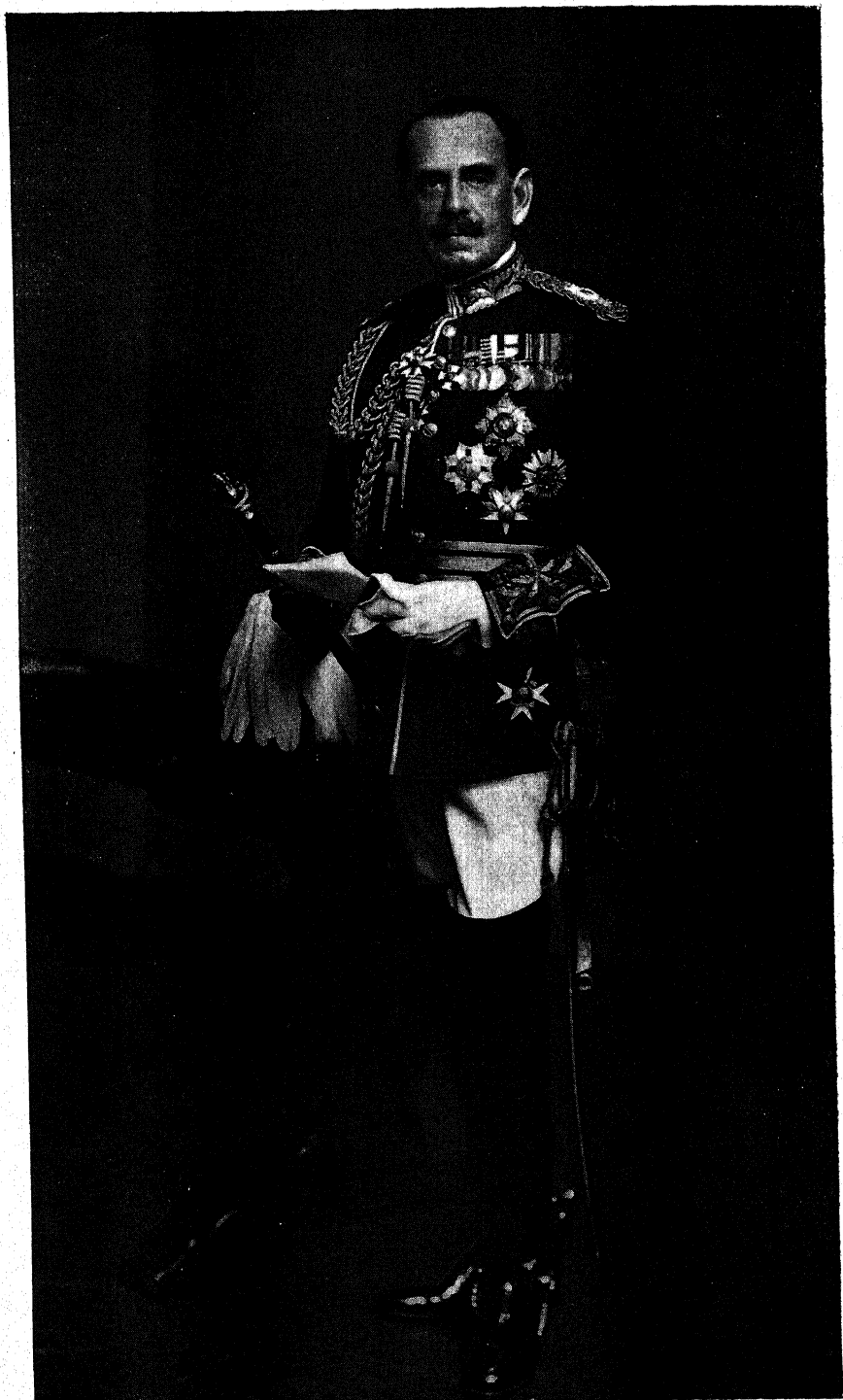
(Published by the Civil and Military Gazette Ltd., Lahore, 1933, Rs. 6).

In Staff College Examination Lectures, Lt.-Col. B. C. Dening has added a new and useful book to the already large collection of works designed to help the student to pass into the Staff Colleges. As Lt.-Col. Dening himself says "such a series of lectures as this cannot cover perhaps one-hundredth part of the ground"; but, one thing the book can do is to indicate the lines on which to study and herein, perhaps, lies its greatest value.

To be successful in this highly competitive examination, the student must have knowledge, and this will only come as a result of diligent study. He must also be thoroughly up-to-date in thought and in actual facts; for the examination is not a mere test of knowledge, it is a test of the ability to apply knowledge. There is, in fact, no short cut to success: if this is borne in mind and the fact that, unlike the manuals, which are constantly amended, these lectures quickly get out of date, Lt.-Col. Dening's little book should be very helpful to those who intend to study for the Staff College Examination.

R. G.





HIS EXCELLENCY FIELD-MARSHAL SIR PHILIP W. CHETWODE, BART.,
G.C.B., K.C.M.G., D.S.O.,
Commander-in-Chief in India.

The Journal

OF THE

United Service Institution of India.

Vol. LXIV. APRIL, 1934. No. 275.

The views expressed in this Journal are in no sense official, and the opinions of contributors in their published articles are not necessarily those of the Council of the Institution.

EDITORIAL.

In this number of the journal our readers will find an article dealing with infantry formations in modern warfare.
Smoke.

This is a criticism of a previous article on a similar subject. Both contributors express the same fundamental idea. How, in the face of machine-guns and accurate rifles, can infantry get to grips with the enemy? Fire and movement combined with skilful use of ground are not enough. Time and again in the Great War the infantry have been stopped and have suffered crippling casualties in the attack of a defensive position held by concealed automatic weapons. The machine-gun is now generally recognised as the "Queen of the Battle-fields," and her reign continues serenely despite even the explosive elements which animate the most ubiquitous and powerful of her rebellious subjects.

It is now generally acknowledged that in an organised attack the odds lie with the defence, unless the attackers have manoeuvring space, and mobile troops to undertake such manoeuvre. The defenders have the choice of ground and the advantages of reconnoitred and prepared positions for counter attack or withdrawal. Usually they have visibility and the inherent adaptability to meet surprise which visibility confers; usually they have obstacles to horse and tank, and machine-guns hidden and almost immune from ordinary artillery fire. These conditions have produced a peculiar *impasse* which gives most of the advantages to the defence and has necessitated a disproportionate loss in lives for the attackers, despite the latter's claim to initiative.

Since 1915 this problem has exercised the minds of all soldiers. It was solved by tanks so far as the actual assault is concerned, but only the most enthusiastic and narrow-minded mechanical expert would dare to state that this success meant that tanks should be substituted wholesale for infantry and cavalry in the Imperial forces. We would quote from a recent article in the R. U. S. I. Journal :

“Time and again in the history of armaments a new weapon has been invented, and enthusiasts have claimed that it will supersede all existing ones. Time and again, trial and experience have profoundly modified early optimism, and the new weapon has taken its proper place in the armament mosaic.”*

Furthermore, it is understood that an armour-piercing machine-gun bullet has been invented which may paralyse tank movement as effectively as infantry are paralysed to-day. Already there is the new double pointed foreign A. P. bullet which, with the anti-tank guns in a battalion, will—in war against first-class Powers—give the Tank only slightly greater advantages than his forbear, the knight in shining armour, achieved against gunpowder. There has been a great lot of hot air, enthusiasm and fanaticism since the War on the respective values which should be accorded to our various armaments and arms. It is difficult to reduce all our naval, air, cavalry, tank and infantry enthusiasts to a common denominator. The more, however, we argue in peace (and with the passage of years of experiment and co-ordination a more general cohesion and mutual agreement are becoming apparent), the better it will be for us when the next war occurs. This is a digression from our main topic, but may help to show that the enthusiastic claims to supremacy of air, artillery, tanks and cavalry need some modification when their attacking infantry is held up by machine-guns, and their arguments are brought to the dreary earth where all strategical problems are ultimately solved.

Some other solution besides artillery and tank assistance, is necessary. Some device to give the infantry (or cavalry or tanks) an opportunity for manoeuvre and surprise. Obviously the use of darkness is important, but night operations have their own limitations particularly in loss of control and the impossibility of defining objectives on the ground to the junior leaders. Nevertheless, the value of darkness for the purpose of effecting surprise needs constant

* “Imperial Defence: The Armament Mosaic.” R.U.S.I. Journal, February, 1934.

thought and practice. Occasions however will continue to arise in war when daylight attacks only are feasible. If, therefore, it is agreed that more protection than that afforded by armour-plate, covering fire, ground and night operations, is required to ensure victory in battle, the question of some artificial method, such as smoke, arises.

In the recent Smoke Demonstrations arranged by Northern Command at Taxila some very interesting situations were staged. For the unbiassed observer it is difficult to disregard all the favourable circumstances which proved so conclusively that smoke, artificially applied so as to blind the defence and protect the attacking forces, is a partial solution to our problem. These circumstances embraced an area of ground rarely found outside landscape targets, a defensive position such as one makes in sand-models, an infantry attack over open, shell-swept ground made inevitable by an "impassable morass" implacably placed to one flank, and a perfect wind which disposed the smoke to the best advantage. Yet as a demonstration staged to show that smoke might be the means of overcoming the machine-gun and that its use will give the attacking forces some means of manœuvre, some chance of surprise and certain hope for protection, this demonstration may well herald a new epoch in tactics.

As an experiment these demonstrations carried out for two days under varying conditions and with different smoke-producing weapons must be declared as an unqualified success. Those who came to jeer—influenced possibly by the *non possumus* attitude of the War Office towards the same subject—remained to cheer. The intelligent application of a smoke screen was visibly and convincingly shown as an immense advantage to an attacking force, and it has raised some interesting questions. We understand that a note on the subject will be issued by Army Headquarters bringing attention to bear on these matters, and asking a number of questions on which Army Headquarters require information from those who are actually training troops. We would like to commend its importance to all our members. Some thorny problems arise from it. With the present attenuated shell power of the artillery of the Army in India what proportion of shells, if any, should be smoke? Should a mortar be added to the diffuse armament of an infantry battalion as a smoke-producing (combined with H. E. shell) weapon? How many smoke grenades for a battalion, how carried, distributed, employed, and at what range? Many fascinating problems come to the fore and

their solution should add interest and variety to training. We shall welcome any contributions dealing with this subject.

In the journal of October 1933 we made some brief editorial comments on Hitlerism in Germany and were rash enough to prophesy that the Nazis, despite their then wide unpopularity, were building on solid foundations, and that Hitler "will probably live to assume similar power and grandeur on the European stage" as did the maligned Mustapha Kemal and Mussolini. The last six months of German history bear out this statement in a surprising degree, and now at the risk of boring our readers, tired as we are of the rumoured clash and distant mutterings of European wars, it seems that the resurgence of Germany is becoming the most important military problem in the Western world. The British Empire has its own pressing military problems in the East, many of which are becoming immediate; but their contemplation only intensifies the muddle of our European military complications.

The Locarno Pact—how absurd all the praise and sensation showered upon its consummation appear now!—tied England to a definite continental rôle in the event of a war of aggression between France and Germany. If Germany attacked France we pledged ourselves to support France, and *vice versa*. It was considered then that the moral support of England's treaty-bound determination—especially when Germany was still obeying her obligations under the Treaty of Versailles—would be sufficient to ensure no bellicose adventures between the two hostile European nations.

Hitler and his Nazis have changed all that. Owing to the impotence of the League of Nations (caused primarily by the commercial rivalry of its constituents), Germany is now able and emboldened, like Japan in Manchuria, to tell the august League to go to blazes. She has, in fact, done so. But Hitler in this deliberate defiance of world opinion has shown a shrewd sense of diplomatic statesmanship as cunning as it is disconcerting to his opponents. When he found himself ringed round with universal antipathy and suspicion the Nazi leader broke up the combination by directly approaching France to subscribe to the Four Power Pact. France, afraid of offending England and Italy, yielded. This manoeuvre disturbed the *Petite Entente* and resulted in the effective severance of the French-subsidised Poland from her former ties. Strengthened

by this admission of international fragility Hitler then provoked a crisis at the Disarmament Conference. America, England and France failed to present a united front, and Germany, freed at last from her bonds, cried "there is no God but Thor and Hitler is his prophet." From that moment Germany has progressed in her Nazi policy. We outlined the main items of this policy in our October 1933, Journal, and their recapitulation might be scrutinised again:

1. Revision of the Treaty of Versailles.
2. Rearmament and equality.
3. The *Anschluss* with Austria.
4. The abolition of the Polish corridor, Silesia and Danzig.
5. Minor restorations; Northern Schleswig from Denmark, Memel from Lithuania, Eupen and Malmedy from Belgium, the Saar, and finally, the overseas colonies.

Within the last few months we have witnessed the Nazi successes in the first few clauses of this programme. If this success is maintained on the scattered fronts of the remaining items the future holds many threats. Despite the recently published German-Polish Pact which declares that the questions of the Corridor, the frontier of upper Silesia, and the status of Danzig will remain *in statu quo* for ten years, we can hardly see more in this than an attempt to curtail criticism until further preparations are made. That Germany could have achieved such an alliance with Poland must be accepted as a tribute to Hitler's diplomacy and can hardly increase his popularity in the French Foreign Office. On this tumultuous stage—standing well up stage for the moment—are the incalculable actors from Russia, Turkey, Hungary and Japan. It is easy to prophesy that they will come into limelight before the curtain of this First Act of the Next World War is rung down.

This language is theatrical but it suits, perhaps, the feeling of drama which the present European situation is causing. There is at present everywhere an intangible sensation of menace and even the most pacifically inclined intellectual journals—to disregard the intolerable pugnacity of our well-known daily newspapers—show an anxious sensitiveness which betrays their uneasiness at England's unpreparedness.

It seems to us that, with the exception of Germany, who had weakness thrust upon her, England is the only great nation in the world which tried genuinely to ensure Peace by disarmament. For

reasons, either altruistic or personal, our statesmen have followed the public school spirit of precept by example; they overlooked the fact that no other country in the world has got even the rudiment of an idea what that indigenous thing "the public school spirit" stands for. Other nations regarded our studied gestures as either perfidious or histrionical. We made a gesture to France and Italy by reducing our air force to the minimum limit; they replied by increasing their's to the maximum. The Royal Navy has been decreased to proportions which even army officers realise is inadequate to deal with its tremendous responsibilities. As for the British Army the less said about this small matter the better. In the event of trouble in Europe during the next few years—a not improbable occurrence when we bear in mind the above survey of Teutonic resurgence—we shall not be surprised if, between them, British commitments under the Locarno Treaty and the average British outlook on the subject of Defence do not land the British Empire in a mess worse than we have known.

From press reports, obviously inspired, it is apparent that Army Headquarters are now busy with some scheme designed to dilute the congestion of those officers in the Indian Army who were commissioned between 1915 and 1920. A glance at the pages of the Indian Army List will show how necessary this is. Most cavalry regiments and infantry battalions have six or more officers treading on each other's heels, of whom perhaps one has the ultimate prospect of becoming a commanding officer. The others, while anticipating their gloomy fate, are naturally anxious to hang on in the hope that death or war will improve their prospects.

But this block of some 1,500 officers, all due for promotion to Major and a field officer's emoluments during the next five years, is expensive. It means that for many years the Indian Army will be employing Lieut.-Colonels, Majors and Captains who will be doing the work of the next junior rank at rates of pay incommensurate with their labour and experience. It also means that it will dam the inflow of subalterns from Sandhurst owing to lack of vacancies, apart from creating a serious shortage between 1945 and 1950 when the great majority of the War Block officers would retire. It must be admitted from all points of view, therefore, that something has got to be done to thin out this abnormal growth in the commissioned ranks which dates from the outbreak of the Great War until its close.

Those affected by this measure deserve in a peculiar degree the sympathy and consideration of those in authority. One may disregard the financial aspect of the question because it should be taken for granted that the *raison d'être* of any axing process is its financial advantage to Government, and no government will ever risk the unpopularity incurred by the dismissal of its servants if it cannot show that such dismissals are of monetary benefit to its taxpayers and electorate. If the scheme will lead to the efficiency of the Indian Army the unfortunate officers who will suffer will have a consoling recompensation, and most of them have known for the last ten years that a critical stage was gradually approaching. On the other hand they have a very legitimate grouse; they all came under the "axe" of 1922-23 which was wielded with exactly the same purpose of thinning out the war block. Many of them have unpleasant recollections of this arbitrary scheme which placed the careers and prospects of young officers under the whim of an individual and caused more dissatisfaction than many senior officers ever realised. When the 1930 Voluntary Scheme was published it excited more mirth than interest. The terms given were generous for those very exceptional cases who had private means or prospects of employment in civil life. That they failed to induce more than 130 officers, of whom only some 70 of the war block, to retire was natural, and it is now very doubtful if any more officers will accept the conditions.

Criticism of our post-war methods to reduce the "War Block" is easy, and it serves no purpose beyond its expression of the feelings which must inevitably rise in the minds of those now affected by the present rumours. The situation has got to be faced that most regiments and battalions will have three to five officers "axed" before 1942. The important questions arise; how is this to be done, and how are those axed to be compensated for this premature curtailment of their careers?

The answer to the first question must be efficiency. The less efficient officers must be got rid of first, which raises the difficult problem of what constitutes efficiency. It will obviously be unfair both to the officer concerned and to his commanding officer to accept the decision of the latter. Officers with from 18 to 22 years' service have gone through a pretty severe testing, especially when their war service is considered, and it would be obviously fairer to have their record sifted and examined by an impartial board appointed by

A. H. Q. with, of course, powers to obtain information from brigade and regimental commanders. It might also be arranged that p. s. c. officers, apart from their staff qualifications, should be considered solely on their regimental merits, especially as the scheme is designed to relieve congestion in regiments and not in formations. A certain amount of unpopularity is bound to ensue in the Indian Army regarding this axing, but we feel that this can be obviated if proper methods are adopted to ensure that the most strict impartiality is observed in the selection of the officers concerned. If the scheme finally approved by Government is a compulsory one it would be fair, also, to permit voluntary retirement on the terms offered. There must be an appreciable number of officers, who, for private reasons, would like to leave India if the terms granted are reasonably good. Their disappearance would ease the situation considerably for those of their brother officers who prefer to continue their soldiering careers.

The second question is that of compensation. The necessity for this axing arises through the fault of Government, and not of its army officers. If this fact is recognised it is obviously the duty of Government to give adequate compensation to its unhappy victims. The majority of these officers are married with children, and in the congested employment markets of the world their chances of obtaining work will not be easy. The best terms would obviously be an adequate pension; but no Government or business can afford to pension off its employees in hard times, and it will require some ingenuity (and a lot of money) to make a square deal. The question of gratuities in lieu of pensions will arise, but the former have in the past been the prey of certain "financiers" and are liable to be wasted. If pensions are offered, some elastic scheme for the commutation of part, so as to provide a little capital, might be devised. We have heard that Government acknowledges sympathetically its responsibility in the matter and is prepared to meet its obligations as generously as is compatible with its financial outlook, but so many of us have seen governmental savings financed by their private roundabouts that it might be useful to set out certain conditions of service under which the officers concerned entered the army and which gave them a certain hope of life insurance:—

1. A great number of officers during 1914—1918 were lured to the Indian Army by an extraordinary prospectus, issued by the India Office, setting forth rates of pay, promotion and pension, and holding

forth the most extravagant promises of tiger shooting ("the sport of kings") and polo, ("the king of sports"). We draw attention to this indignified document, now decently buried in the waste paper baskets of all disillusioned officers, to show that the India Office has an obligation in the matter.

2. The officers affected served during the Great War and have therefore a back ground of experience and war service. The sentimental force of this argument is liable to undue importance, but its practical importance cannot be gainsaid.

3. These officers have already been through a severe process of axing which only those with "A" qualifications survived.

4. Under the time scale of promotion in the Indian Army the majority of these officers could look forward to at least 26 years service and a pension of from £566 to £800, less the cost of living cut.

5. Finally, it might also be emphasised that for many years these embryonic Majors have been doing Major's work as Subalterns and Captains.

THE BATTLES OF GENERAL SAMSONOV'S ARMY ON THE 26TH, 27TH AND 28TH AUGUST 1914.

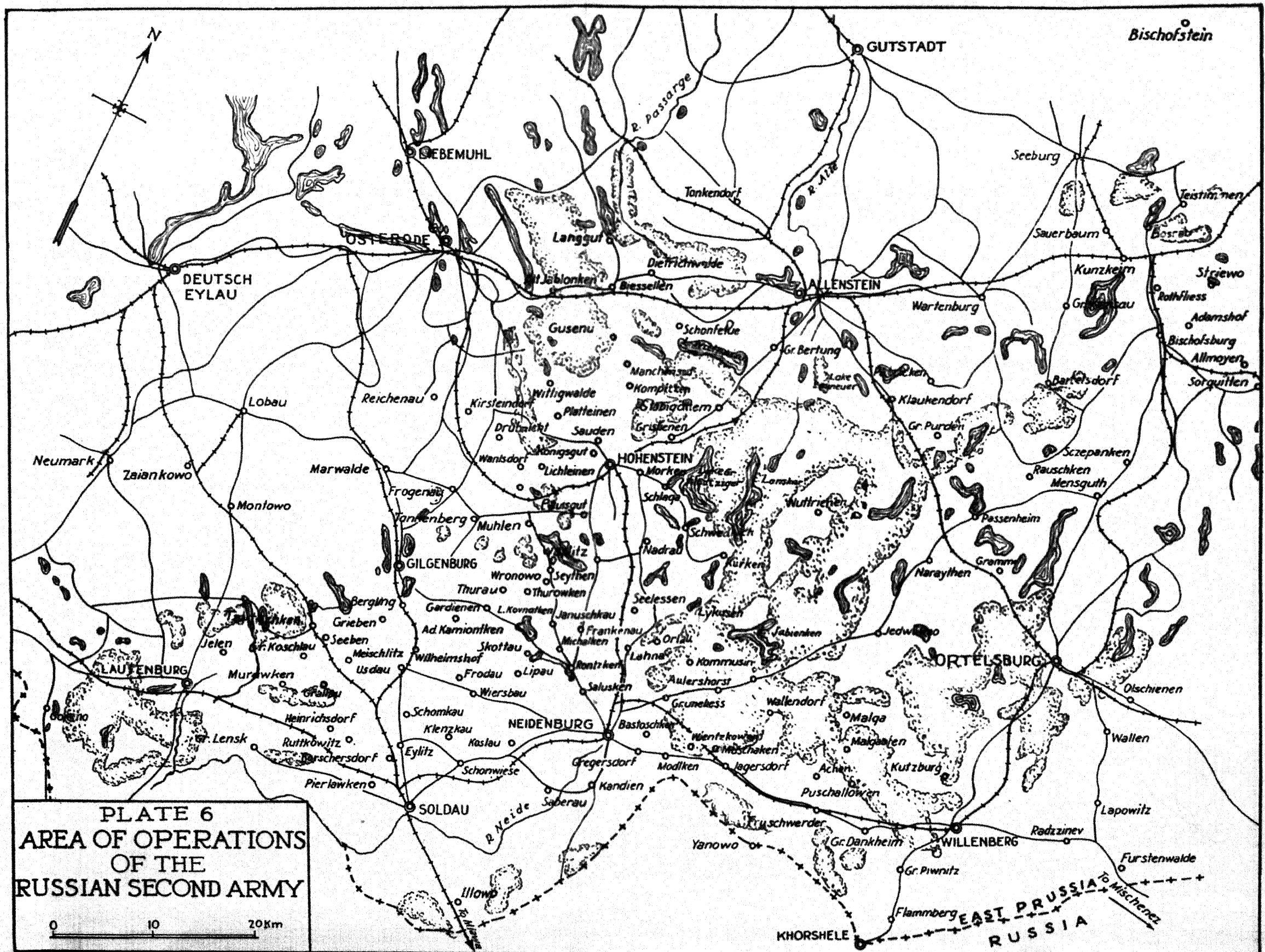
BY LIEUT.-GENERAL N. GOLCVINE, C.B.

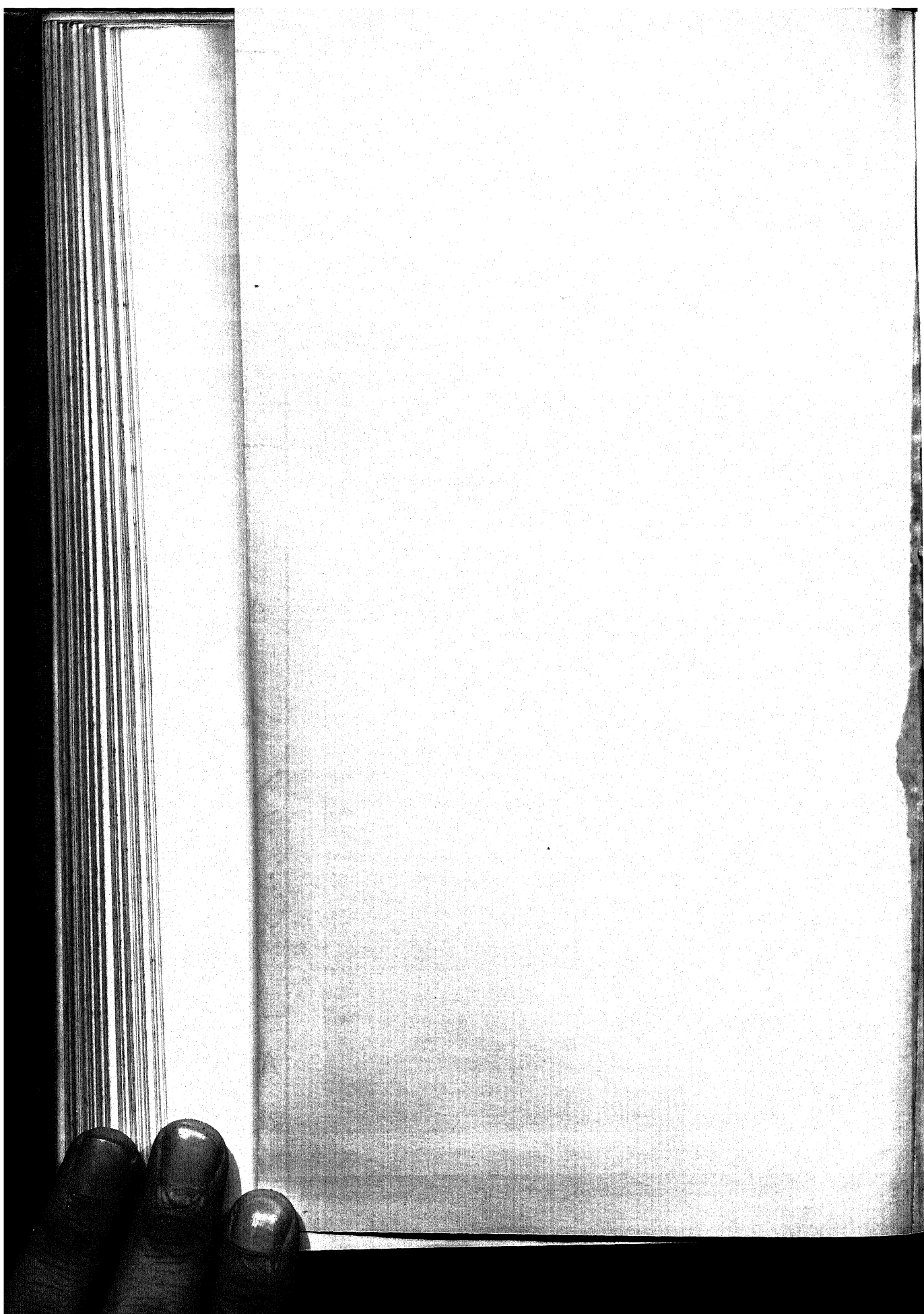
(Continued from the article in the January 1933, number of the Journal.)

It was impossible to concentrate General Samsonov's army, spread out fanwise as it was, for the decisive days of the battle. The army battle resolved itself into a number of entirely independent corps engagements, and therefore the operations of the 26th and 27th August, the days which decided the fate of the Second Army, must be discussed separately for each corps. For the sake of convenience we will commence with an account of the engagements fought on the front Hohenstein-Soldau.

Up to 1 p.m., on the 26th August General Klyuev, the Commander of the XIIIth Corps, expecting the cancellation of the Army Orders, had not commenced the Northward march ordered therein. The order to march on Allenstein was confirmed at 1 p.m., and the corps advanced towards Allenstein in two columns. By evening, without encountering any resistance, the corps had debouched from the defile formed by lakes Lansker and Gross Plautziger, leading to the line specified in Army Orders (Darethen-Kellaren). A heavy bombardment in the Hohenstein area was heard during the march, but, being masked by Lake Plautziger, it was not possible to afford any immediate co-operation to the XVth Corps. In view of the fact that on the 26th August General Samsonov had confirmed his orders to advance to Allenstein, General Klyuev, the Commander of the XIIIth Corps, was unwilling to decide on his own initiative on the evening of the same day, upon a course which involved a change of direction for his corps of nearly 180 degrees. He therefore telegraphed to the Staff of the Army on the evening of the 26th, as follows: "I propose to march to the assistance of the XVth Corps." However, shortly after the despatch of this telegram Operation Orders for the 27th arrived from the Staff of the Army. The following were the orders issued to corps:—

"The VIth Corps, leaving a screening force at Bischofsburg, is to march on Allenstein to co-operate with the XIIIth and XVth Corps in striking a blow against the left flank of the enemy; the XIIIth and XVth Corps are to continue their offensive, aiming at the occupa-





tion of the line Allenstein-Osterode ; the Ist Corps is to continue in the execution of its present task of safeguarding the left flank of the army." ¹

By this time communication between the XIIIth Corps and the Staff of the Army had been temporarily interrupted as the local inhabitants were tearing down the telegraph lines wholesale. There was also a breakdown in communication with the VIth Corps. A liaison officer who arrived on the 25th August from the Staff of the VIth Corps could only report that the corps had marched north towards Bischofsburg in accordance with the instructions of the Staff of the Army. There were no reports from the frontier guard patrols which had been sent out in this direction. None of the attempts made by the wireless station to call up the VIth Corps during the night 25th-26th led to any result, for the powerful station of the Fortress of Novogeorgievsk was working the whole night, transmitting reports and returns to G. H. Q., and the weaker field stations could not get through with their calls. Just before dawn success was achieved, and the VIth Corps replied to the calls ; a despatch was transmitted, and information demanded with regard to the situation, but the reply received could not be deciphered, and the VIth Corps made no reply to subsequent calls. Communication with the VIth Corps could not be re-established throughout the whole of the 26th.

Corps reconnaissance reports stated that Allenstein had been evacuated by the Germans. The presumption was that the Germans, not wishing to subject the town to a bombardment, had retired to the North. Also, according to the information communicated by the Staff of the Army, there were two German corps in the area Guttstadt-Alenstein-Osterode. Under such conditions General Klyuev feared to take the initiative and thereby fail to comply with Army Orders lest he should place the VIth Corps, which had been sent to Allenstein in a difficult position. There were other reasons, connected with the maintenance of supplies, arguing for the immediate occupation of Allenstein. The corps had now been for several days without bread, and the supply of biscuits was also exhausted. The XIIIth Corps was now seven marches away from its base at Ostrolenko, and, as there was not even corps transport, as soon as the

¹ " Operations in Eastern Prussia in July, August and the beginning of September 1914," Vatsetis, Moscow, 1923, p. 83.

frontier was crossed it had become impossible to bring up supplies. General Klyuev intended to feed his hungry troops by requisitioning the bakeries of some centre of population.

As no reply had been received from the Staff of the Army in the course of the night 26th-27th, General Klyuev was forced to ask the Commander of the XVth Corps whether the assistance of the XIIIth Corps would be required by him on the 27th. On the morning of the 27th, when the Corps column had commenced to march off, a telegram was received from the Commander of the XVth Corps, asking for co-operation. General Klyuev decided to move the nearest division (the 1st) to Hohenstein immediately, and to concentrate the other (the 36th) in the Stabigotten area, to enable him, as soon as the situation should become clear, either to move this division also to Hohenstein, or else, in case of need, to march it to Allenstein to assist the VIth Corps. However, before the Staff of the Corps had had time to issue the necessary orders, a second telegram was received from the Staff of the XVth Corps: "By orders of the Army Commander please send a brigade to report here for orders." General Klyuev took this telegram as the answer not only of the Commander of the XVth Corps, but of the Army Commander also. The 2nd Brigade of the 1st Division, together with a group of artillery, was immediately sent to afford assistance, but the remaining units of the Corps were marched to Allenstein, which was occupied without fighting during the latter half of the 27th August.

Shortly after the arrival of these units in Allenstein, two aviators landed there. One of them rendered a report of the dispositions of the XVth Corps. The other stated that when flying over Wartenburg he had seen two columns, say a division each in strength, marching towards that town from the south-east; he could not say whether they were our own or the enemy's.

An officer of the General Staff of the XIIIth Corps had occupied the observer's seat in the first machine, in order to ascertain with greater accuracy the trace of the XVth Corps front. Concerning the columns which had been observed approaching Wartenburg the Corps Staff was convinced beyond doubt that this must be the VIth Corps on the march; as regards both time and direction the information given by the aviator fully justified this conviction. This aviator was entrusted with a despatch containing a statement of the situation, and was ordered to land beside one of the columns he had seen, and

to transmit the despatch to General Blagoveshchensky, the Commander of the VIth Corps. *Inter alia*, in this statement General Klyuev declared it to be his intention, failing the receipt of instructions from the Staff of the Army by the morning of the 28th August, to march the XIIIth Corps at dawn, either to Hohenstein, or, if the situation so required, to Osterode, to co-operate with the XVth Corps. A mounted reconnaissance party under an officer was despatched by the Corps Staff to Wartenburg, to verify the aviator's information.

The aviator flew off, but had not returned by nightfall. In view of the poor condition of the machines this circumstance caused no special anxiety.

The conviction that the VIth Corps was approaching was so strong that when one of the scouts who had been sent out in the afternoon by General Prejentsov, the Commander of the 36th Division, galloped up to him that evening and reported that he had seen a column marching towards Wartenburg, and that when he had approached this column they had fired on him, General Prejentsov attached no particular importance to this, as cases had previously occurred of our own troops firing on our scouts, and even on members of the staff carrying orders.

On the evening of the 27th August the following message was received by the Staff of the XIIIth Corps from the Commander of the nearer division of the XVth Corps. "By order of the Army Commander the XIIIth Corps is placed under the orders of the Commander of the XVth Corps. The Commander of the XVth Corps orders an immediate march to co-operate with the XVth Corps by directing a blow against the left flank of the enemy." By this time the officer of the General Staff who had been flying over the XVth Corps positions had returned to the Staff of the XIIIth Corps and had reported in detail on what he had seen. It was, however, quite impracticable to turn out the corps immediately for a night march, as the troops had already marched ten days without a rest and were utterly exhausted. The march could only be ordered to commence at dawn on the 28th August. In view of the fact that the XIIIth Corps would have to complete a march of more than 30 versts in the course of the 28th, General Klyuev considered that on the evening of the 28th the corps would only have time to deploy and that his forces as a whole would not be able to join battle to the southwest of Hohenstein before the 29th August. Therefore, fearing a

German blow against Neidenburg from the west, General Klyuev sent a message to the Commander of the XVth Corps, stating that the movement which he had been ordered to carry out would only be of use should the XVth Corps be in a position to hold its ground up to the morning of the 29th, he therefore asked for an officer of the General Staff, with a full appreciation of the situation up to date, to be sent to meet him before the XIIIth Corps reached the battlefield.¹

This completes the sum total of the part played by the XIIIth Corps during the decisive days of the fighting between the Second Army and the Germans. Thus, out of the five infantry divisions left in General Samsonov's hands for the decisive operations, by sending the XVIIth Corps in the wrong direction, he had deprived himself of the use of one and a half infantry divisions in the battle, *i.e.*, a third of his strength, low as it was already.

The crucial strain in these operations fell entirely upon the two divisions of the XVth Corps.

On the morning of the 26th August the XVth Corps marched off in three columns in the direction specified for it in Army Orders. By 1 p.m., it had reached the line Schwedrich-Nadrau-Waplitz and had then entered the battle area. The town of Hohenstein itself was occupied by a brigade of the 8th Infantry Division (the central column) without fighting. However, the 6th Infantry Division (the left hand column), had encountered stubborn resistance on the part of the enemy, especially in the Mühlen area, where it became involved in a hot fight. By evening the 6th Division had deployed, with its left flank facing Mühlen, and its centre and right flank on the line Lichtenen-Königsgut; the 8th Infantry Division was occupying the line Grieslicen-Hohenstein.

It had become clear, from reports from the troops and from the results of reconnaissance, that the main line of resistance of the enemy was on the western bank of the river Dreventz. At the same time air information had been received, to the effect that there was a strongly fortified position extending between lakes Mühlen and Damerau, and that a large number of batteries were in that locality. This latter information was immediately communicated to the Staff of the Army and the 2nd Infantry Division, which was attacking upon this front.

¹ "Brief outline of the operations of the Army of the Narev" by V. Fuchs, of the General Staff of the XIIIth Corps; "Voenny Sbornik," No. 4, pp. 134, 135, 136 (Belgrade).

The Commander of the XVth Corps appreciated the situation quite correctly, and decided, before continuing the march forward in accordance with Army Orders, to defeat the enemy in his position on the bank of the river Dreventz. For this purpose, however, it was necessary to wheel the corps, during the night 26th-27th August, through an angle of more than 45 degrees. This decision was communicated to the Staff of the Army.

"On the morning of the 27th August," writes General Martos,¹ "I sent Colonel Panash to the General Staff telephone, to inform General Postovsky² of my firm belief that it was essential to the success of the whole operation that General Klyuev's corps should combine with me, instead of marching on Allenstein. The two corps together could then inflict another defeat upon the Germans, whose strength, from the number of their heavy guns, I estimated to be not greater than one corps. General Postovsky replied that the Army Commander did not wish to confine General Klyuev's initiative, but that one brigade of the XIIIth Corps would be placed at my disposal for the occupation of Hohenstein and for a blow against the Germans from that town. I was greatly surprised at this reply, as it was not upon his own initiative that Klyuev was marching upon Allenstein, but only in fulfilment of Army Orders....."

It may be concluded from the further description of this incident given by General Martos, that the report of the XVth Corps Commander, which was of the greatest importance from the point of view of strategy and which had been conveyed by Colonel Panash to the Chief of Staff of the Army, was not transmitted by the latter to General Samsonov.

"Thus, on the morning of the 27th August," General Martos goes on to say, "when I delivered an attack with the whole corps against the enemy position, the XIIIth Corps was being marched to Allenstein, in the opposite direction."

The battle raged from the morning of the 27th August. The XVth Corps was now fighting on a front between Dröbnitz and Mühlen, facing west. The enemy's resistance was stubborn, and

¹ "Outline of the operations of the XVth Corps in Eastern Prussia in 1914," by General Martos, p. 13. Manuscript in the possession of the author.

² Chief of Staff of the Second Army.

the Brigade of the XIIIth Corps, which arrived from Stabigotten in the afternoon, was sent from Hohenstein to Dröbnitz, to outflank the enemy's left from the north.

About 4 p.m., the Corps Commander issued orders for a general attack. The units of the XVth Corps despite heavy losses, commenced an energetic offensive upon the whole front. About 7 p.m. the Russians succeeded in obtaining temporary possession of Mühlen, which was strongly fortified. Nevertheless at nightfall the Germans were still holding their positions on the bank of the river Drewenz. The Brigade of the XIIIth Corps had not fulfilled its task, and the German left flank still extended behind the river Drewenz to the north of Dröbnitz. At nightfall this brigade was entangled in the forests to the south of the colony of Plateinen. Worn out by ceaseless marches, and by the forced march again executed on the 27th it fell a victim to panic and retreated in disorder to Hohenstein.

"About 5 p.m. with a continuous bombardment in progress along the whole corps front, and with the rifle and machine-gun fire increasing from moment to moment," writes General Martos, "I was called to the telephone by General Postovsky".....
 "....General Postovsky transmitted to me the following orders from the Army Commander: on the morning of the 28th August the XVth Army Corps was to march on Allenstein to co-operate with the XIIIth and VIth Corps. He added that a strong concentration would thus be formed for a blow against the Germans. I replied that it was impossible to carry out these instructions, as all the units of the corps were engaged in fierce fighting, and the enemy was receiving continual reinforcements, and that an aviator who had returned a short time previously reported a continuous movement of German troops towards the east. When Postovsky nevertheless began to insist on the execution of these orders, I declared to him finally that the Army Commander could appoint a General to take over the Corps, and relieve me of my command. "I will report our conversation to the Army Commander," replied Postovsky, "and in an hour's time I will call you up on the telephone." However he did not again call me to the telephone....."

The 2nd Infantry Division (the XXIIIrd Corps) was to have marched to the south of the XVth Corps, echeloned in rear of its

¹ In his "Outline" p. 14.

left flank. It passed the night preceding the 26th August at Skottau and Lippau. By the evening of the 26th it was to have reached the line of the main road Hohenstein-Reichenau. The division marched off in two columns; the left (the 2nd Brigade) marched westward of lake Kownatken to Gross Gardienen-Thurau; the right (the 1st Brigade) marched eastward of lake Kownatken to Seythen-Mühlen. On the line Gross Gardienen-Thurau-Seythen both brigades came under a cruel fire from an artillery many times stronger than theirs. Nevertheless the 2nd Infantry Division, which had become extended over a front of ten versts, continued to advance with determination. In the end, after suffering very heavy casualties, both brigades retreated; the 2nd Brigade to Lippau, the 1st to Yanüshkau.

Lest the reader should unjustly condemn these troops, we will give here a few details of the operations of one of the brigades which suffered most on this day, namely the 2nd. An account of the attack by the 7th Reval Infantry Regiment shows that before attaching Thurau the regiment had had to conduct an advance under the flanking fire of the enemy. Nevertheless the regiment advanced cheerfully, inspired by the gallant example of its commander and officers. The first line of German trenches was captured, but when the regiment executed a further advance, it came under the fire of heavy artillery, to which our field guns could not even reply, as they were outranged. Considerable enemy forces then charged the left flank of the regiment. The details of the fighting afford many examples of striking heroism. The handfuls of men remaining out of the regiment, which had melted away owing to its losses, executed several counter attacks at which they got to grips with the bayonet. With one of these groups was the regimental commander, who had been severely wounded. But no amount of heroism could re-establish the situation. The remnants of the regiment fell back, with difficulty getting their standard away. The Reval Regiment, which had $13\frac{1}{2}$ companies in this engagement, lost in killed and wounded 51 officers and 2,800 other ranks, *i.e.*, more than 75%. For all practical purposes the regiment had ceased to exist.

On the following day, the 27th August, under enemy pressure the 1st Brigade retreated to Frankenau, but the remnants of the 2nd Brigade retreated to Neidenburg in complete disorder. The men were absolutely worn out, there was no S. A. A., and for three days now no bread or biscuits had been issued.

As the result the road from Gilgenburg to Neidenburg were completely open to the Germans. These roads led direct to the rear of the XVth and XIIIth Corps.

On the morning of the 26th August the 1st Army Corps, under the command of General Artamonov, was disposed as follows : the 24th Infantry Division was deployed on the front Usdau Gravlau, thus, threatening to turn the right flank of the German XXth Corps, which was to the south of lake Damerau. Advanced units of the same division had been pushed forward to the line Bergling Seeben Murawken ; on the right flank of this division was the 1st Brigade of the 6th Cavalry Division (General Shtempel). On the left flank a Brigade of the 22nd Division had been pushed forward in the direction of Heinrichsdorf. The other brigade of this division was in corps reserve at Soldau. The 2nd Brigade of the 6th Cavalry Division was operating in the Lensk area. Finally, the 15th Cavalry Division was operating still farther to the left, in the direction of Lautenburg and to the south of it.

During the second half of the 25th August the 15th Cavalry Division was hotly engaged at Lauthenburg, which they occupied for a period. Here they had to deal with General Mühlmann's Brigade, which had advanced from Strasburg. After street fighting the town of Lautenburg was again captured by the Germans.

As already stated, on the 25th August General Artamonov reported to the Staff of the Army that the Germans had commenced an offensive from the direction of Lautenburg and lake Damerau, and that General Samsonov had placed the 1st Rifle Brigade and the 3rd Guards' Infantry Division, which had arrived at Mlava, under the orders of the Commander of the 1st Corps.

A German offensive upon the whole front commenced from the early morning of the 26th August.

The advanced units of the 24th Infantry Division were holding out stubbornly in the area Seeben Gross Koschlau. In view of the strength of the attack being developed by the Germans against the right flank of the Russian 1st Army Corps, General Artamonov transferred his corps reserves to Frödau. By evening the right flank and centre of the 1st Corps had fallen back to the line Wilhelmshof (one verst to the north of Usdau)—Gross Tauersee. The enemy was now occupying the front Gross Grieben-Meischlitz-Heinrichsdorf.

General Artamonov's reports to the Staff of the Army regarding the fighting of this day were optimistic and might even be characterised as boastful. At night the 1st Infantry Brigade arrived at Soldau from Mlava, but nevertheless the 1st Army Corps was in an extremely dangerous situation. Owing to the defeat inflicted on the 2nd Infantry Division by the Germans on the 26th August, the right flank of the 1st Corps at Usdau was hanging in the air. The brigade of the 6th Cavalry Division without artillery was no safeguard, and could only screen the empty expanse which had been formed. Moreover the remnants of the 2nd Brigade of the 2nd Infantry Division, which had assembled at Lippau on the 27th August were quite useless for fighting. According to the testimony of the Chief of Staff of the Second Army,¹ General Samsonov all the while feared for the safety of the 1st Army Corps, and even despatched Colonel Krymov to the Staff of this Corps, to remain with General Artamonov expressly for the purpose of keeping him fully informed of all that was happening in that quarter. All the greater must be the astonishment aroused by the idea of concentrating the XIIIth, XVth and VIth Corps on Allenstein, which, by the evidence of General Martos, was the plan of the Second Army Staff.

At 4 a.m. on the 27th a very strong German artillery opened concentrated fire on the positions of the 24th Infantry Divisions. The overwhelming superiority of the enemy in artillery soon enabled him to obtain the supremacy in artillery fire. Our artillery fire was kept down by the enemy, and our infantry suffered heavy losses, a particularly serious moral effect being produced upon it by the numerous heavy guns of the enemy. Nevertheless, the infantry of the 24th Division held on to their position heroically, and the divisional artillery at the least opportunity did its utmost to afford the infantry assistance. When it became clear that the Germans were outflanking our right the brigade of the 22nd Infantry Division which had been in corps reserve at Fredau was put into the fighting line. But the German flanking movement nevertheless continued to develop; their artillery commenced to batter the Russian positions with flanking fire. About 11 a.m. our infantry could no longer hold out and commenced to retreat on Soldau.

¹ "The offensive of General Samsonov's Army in Eastern Prussia," by General Postovsky, p. 8. (Manuscript in the possession of the author).

A German offensive from the direction of Heinrichsdorf had also commenced from the early morning, but the 2nd Brigade of the 22nd Infantry Division, which was facing them, was joined by the 1st Rifle Brigade which had arrived by rail from Novogeorgievsk. The riflemen, together with the men of the Petrovsky and Neishlotsky Regiments executed an energetic counter-offensive, and the German infantry began a hasty retreat. The riflemen, following them up, even captured Heinrichsdorf, but it then became difficult for our infantry to advance further, the Germans covering the retreat of their infantry with artillery fire. The Russians had not the superiority in number of batteries necessary to neutralise this fire. The battle assumed a static character, but just after noon it was learnt that the right flank of the 24th Infantry Division had been defeated at Usdau. The left flank of this division, which had been fighting at Gross Tauersee, also commenced to retreat on Soldau, following up on the right flank. The Germans, advancing on the tracks of the 24th Infantry Division, began to threaten the right flank of our troops fighting at Heinrichsdorf, and therefore a retirement commenced here also.

By the evening of the 27th General Artamonov's corps had assembled to the south of Soldau, with only a composite rearguard of five regiments of infantry and six batteries to the North of the River Neide. By the evening of the 27th the roads from Usdau to Neidenburg were thus completely open to the Germans. On these roads was left only General Shtempel's Cavalry Brigade, which on this day had had to extend farther to the north in order also to guard the roads from Gilgenburg to Neidenburg.

The operations of the 1st Army Corps on the 27th gave rise to grave charges on the part of the Higher Staffs against this corps, in that it had brought disaster upon the whole of General Samsonov's army by a premature retirement. The majority of Russian military writers hold a similar opinion and adopt a severe attitude towards this corps. We would, however, ask the reader to defer his judgment until we have explained rather more fully what had taken place on the German side. In the present instance the historian must exercise great caution with regard to the opinion of the Staff of the Second Army and the Staff of the Army Group, where there were too many people interested in finding a scapegoat to bear the blame for the gross strategic blunders which had been committed. Such "scape-

goats " are always the troops and their immediate commanders in the field. This may be said to be a kind of psychological law, and has been skilfully portrayed by Count Tolstoy in the pages of " War and Peace."

It must be remarked here that there was another reason for the Higher Staffs to adopt a hostile attitude with regard to the operations of the 1st Corps. The complete lack of training in the administration and command of a corps on the part of the corps commander and his staff was suddenly revealed to them. General Artamonov had done his best to " command " his corps by applying the methods of an epoch long gone by. This had led him to interfere in the affairs of subordinate commanders, which, in its turn, could not but breed confusion. Wishing to encourage the troops by his personal example, he was motored around the positions occupied by his troops, which led to the neglect of the " control " of the corps. General Artamonov himself completely failed to grasp the essential idea of the battle upon the whole front. Only this can explain the fact that, just an hour before his troops were in full retreat from Usdau, General Artamonov wrote in his report to the Commander of the Second Army that the corps remained " firm as a rock." One can only be amazed at the stubborn way in which the troops continued to fight, despite the confusion in control. But when the situation had really become serious the results of this absence of control became evident; the retreat when commenced could not be regulated. The state of chaos in the central organ of control—the staff of the Corps—is demonstrated by the following example. When Colonel Krymov wished to inform the Commander of the Second Army direct that the retirement of the 1st Corps had commenced, he could not do so; the telephone, the telegraph, and even the wireless station had been evacuated.

Whilst the engagements described above were being fought out on the front Hohenstein-Soldau, a VIth Corps battle took place at Bischofsburg on the 26th August.

It will be recalled that by *Directive* No. 4 of the 23rd August this corps, together with the main body of the army, in accordance with the orders of the Commander-in-Chief, were to have marched to the Bischofsburg-Sorquitten front. To their right marched the 4th Cavalry Division, upon which the same *directive* had imposed the

following task : " To advance on Sensburg and to reconnoitre the stretch of country bounded on the right by the line Rastenburg-Gerdauen-Allenburg, and on the left by the line Rössel Schippenbeil-Domnau, observing towards Lötzen."

The VIth Corps and the 4th Cavalry Division marched in the directions ordered ; the latter sent out a strong chain of reconnaissance parties to clear up the situation in the stretch of country specified.

On the 25th August the VIth Corps and the 6th Cavalry Division received amendments to the *directive*. These had been necessitated by the Commander-in-Chief's sanction to attack, not the front Sensburg-Allenstein, but the front Allenstein-Osterode, with the main body. According to these amendments the VIth Corps was to remain at Bischofsburg, and was given the task of guarding the right flank of the army from attack from the direction of Rastenburg. The area to be reconnoitred by the 4th Cavalry Division was also changed ; this stretch of country was now bounded on the right by Rastenburg-Bartenstein, on the left by the line Seeburg-Heilsberg.

By the evening of the 26th August the VIth Corps was disposed as follows : the 16th Infantry Division at Bischofsburg with an advance guard at Adamshof ; the 4th Infantry Division at Rothfless with an advance guard at Kleiack. The outpost line was Allmoyen-Striewo-Teistimmen, facing north-eastwards. Hence it will be seen that the corps was disposed for the night with Rastenburg taken as the direction of danger, which was in accord with the instructions given by the Staff of the Army.

The VIth Corps, like the corps of General Samsonov's army, was not at full establishment, but in the VIth Corps the shortage reached extreme bounds ; the 16th Infantry Division was without the 61st Vladimir Regiment, and the 4th Infantry Division was short of fourteen companies and one battery. There were six sotnias at the disposal of the Commander of the VIth Corps to fulfil the role of Divisional Cavalry. Incidentally, the strategic task of guarding the right flank of the army in the area between Allenstein and the principal Masurian Lakes made it essential for the Commander of the VIth Corps to have large numbers of cavalry at his disposal. It is true that the 4th Cavalry Division which in peace time belonged to the establishment of the VIth Corps, was next to that corps at Sensburg, but the Corps Commander was not now free to issue orders to it, as it was army cavalry, and moreover its disposition at Sensburg had

been settled beforehand by the Commander-in-Chief. As the result the VIth Corps had to content itself with close reconnaissance alone by its weak cavalry.

The Army Commander's orders, which had been forwarded to the 4th Cavalry Division, altered the direction of their distant reconnaissance. This Division had to send out a new series of reconnaissance squadrons and patrols, for the new stretch of country to be explored only overlapped the old in a small sector between Rastenburg and (Rössel). The 4th Division was only at a three-regiment establishment. This doubtless must have had its effect upon the speed with which the change of front of the reconnaissance could be carried out. At the same time the results of the distant reconnaissance could only reach the Staff of the VIth Corps after great delay; before reaching the area Bischofstein-Lautern-Seeburg the reconnaissance units of the 4th Cavalry Division had had to cover a distance of more than 20 versts along the VIth Corps front; thereafter the reports of these units had to be got back along the same road to the Staff of the 4th Cavalry Division, whence they were communicated to the Staff of the Corps. Nevertheless, during the night 25th-26th August General Blagoveshchensky received information of the presence of large enemy forces at Lautern and Seeburg. The Commander of the VIth Corps, considered that in order to fulfil the task imposed upon him he ought to cover the right flank of the army in the direction of the forces which had been discovered at Seeburg, moved the 16th Infantry Division closer to Allenstein. The idea behind this decision was correct, but to carry out this idea the 4th Infantry Division should have been given the necessary warning against becoming involved in serious fighting with superior forces of the enemy, and told to retreat in such a case to Passenheim. With our commanders' complete lack of training, the execution of manœuvres of this type required the issue by the Corps Commander of specially detailed instructions to his subordinates, but nothing of the sort was done.

On the morning of the 26th August the 16th Infantry Division was despatched to Bartelsdorf. By that time fighting had commenced on the outpost line of the 4th Infantry Division. The enemy began his offensive from Lautern, and in ever increasing strength continued to extend his front westward, until by 11 a.m., a furious battle was raging on the line Teistimmen-Gross Bussau-Kanzkeim. An artillery many times our superior had been brought into

action on the enemy's side. On our side the whole of the 4th Infantry Division had been drawn into the battle and had quickly exhausted their reserves. Our artillery had been forced to give up the struggle with the enemy's batteries, and to fire only on those units of the enemy which were placing us in the greatest danger. The Russian regiments resisted gallantly, suffering enormous losses from the hostile artillery fire. Owing to the paucity of our artillery the German infantry got to grips so quickly that it was now impossible to break off the battle before evening. Fearing that the 4th Infantry Division was in no state to hold out till the evening, at 10 p.m. the Commander of the VIth Corps sent orders to the 16th Division to return to Bischofsburg. About 5 p.m. the Commander of the 16th Infantry Division, while the division was still more than seven versts from Bischofsburg, received new orders from the Corps Commander to send one regiment to Bischofsburg as corps reserve and to march the remainder of his forces westward of lake Dadey to Ramsau, for a further advance on Sauerbaum. General Blagoveshchensky expected that this blow at the flank of the enemy units attacking the 4th Infantry Division to the east of lake Dadey would assist the latter to break off the battle. But this idea, though correct in itself, was not founded on considerations of time and space. The only result was the trouble which ensued for the 16th Infantry Division. While the 16th Infantry Division was completing its march, the 4th Infantry Division, surrounded on three sides, yielded ground and commenced a retirement which quickly assumed the character of a *saute qui peut*, back to Ortelsburg. The retreating troops became inter-mingled with the transport, and the whole rearward movement became disorderly. In the battle of Bischofsburg the 4th Infantry Division, with an establishment of twelve and a half battalions, five field and two howitzer batteries, lost 73 officers, 5,283 other ranks, two batteries and eighteen machine-guns. Infantry casualties thus reached 50 per cent.

The 16th Infantry Division and units of the 4th Cavalry Division covered this disorderly retreat. At dawn on the 27th August the 16th Infantry Division began to retire from Bischofsburg towards Mensguth, where its rear guard at about 4 p.m. became involved in action with the enemy's advance guard, which had overtaken it to the north of Mensguth.

The main body of the 16th Infantry Division was also gradually deployed and put into the battle. "The enemy attacks were feeble,

and at dusk the fighting died down," writes an officer of the General Staff of the 16th Infantry Division,¹ "the Division moved on to Ortelsburg by a night march, reaching that town on the 28th August. According to orders the Staff of the Corps should have been at Mensguth, but it had not turned up there and touch with it was lost. In the same way touch had been lost with the 4th Infantry Division during its hasty retreat. The 16th Infantry Division passed by Ortelsburg, which was in flames, and took up positions a little to the east of it." The author of this article gives a clear picture of the effects upon the 16th Division of all General Blagoveshchensky's blunders in the direction of the VIth Corps. He was, of course, to blame for these blunders, but unfortunately they were due to the general lack of training of our commanders and General Staff in operations with large bodies of troops. In this regard the command of the 16th Infantry Division also provided a bad example. In fact, according to the assertion of the author just quoted, touch had been lost with the Corps Commander, and this had occurred even before the Division passed through Mensguth. Thus it had become the duty of the Divisional Commander and his staff on their own initiative to come to a decision in accord with the strategic situation which had developed. The Commander of the 16th Infantry Division and his staff could not be ignorant of the fact that the remaining corps of General Samsonov's army were at Allenstein and to the west thereof. Under these conditions there was only one route for the 16th Infantry Division—the road to Passenheim, where they would be able to defend the defile existing between the lakes, and to prevent the enemy corps from debouching in rear of the main body of General Samsonov's army. The command of the 16th Infantry Division, however, preferred to confine itself to a passive rôle, and, instead of taking this course, trundled along after the 4th Infantry Division and the Corps Command, which had departed southward.

By the morning of the 28th August the VIth Corps found itself in the area Olschienen-Wallen. The 4th Cavalry Division had been sent out in the direction of Grammen, in order to block the path of the enemy cavalry from Passenheim. Nevertheless, one cannot but consider the withdrawal southward of the 16th Infantry Division,

¹ "The operations of the VIth Corps and the main reasons for the failure of the Second Army in Eastern Prussia," p. 168 "Voenny Sbornik" No. 4 (Belgrade).

a unit fully capable of fighting, to have been a gross strategic blunder on the part of the Corps Commander and the Divisional Commander, and one which led to disastrous results for the central corps of the Second Army.

Meanwhile what had become of the Staff of the Second Army during these decisive days (the 26th and 27th August)? To what an extent the command of the Second Army had misjudged the situation may be seen from the above quoted orders for the 27th August, and in particular from the conversation which took place, according to the testimony of the Commander of the XVth Corps, between him and the Chief of Staff of the Second Army on the 27th August. Apparently General Jilinsky's obstinacy in pushing the Second Army northwards had transmitted itself to his subordinates in the chain of command, and the Staff of the Second Army, despite the situation and opposed to all reason, was pushing the main body of the army to Allenstein. The circumstance that this new "strategical" attitude on the part of the command of the Second Army followed immediately upon General Jilinsky's concessions, is extremely interesting as a psychological sidelight.

By the evening of the 27th the disastrous situation of the Second Army must have been quite clear to the command of the Second Army. General Samsonov's report to the Staff of the Army, timed 11-30 p.m. of the 27th August, is proof of this.

"To-day is the second day upon which the army has been fighting upon the whole front. It appears from the interrogation of prisoners that the 1st, XVIIth, XXth Army and 1st Landwehr¹ Corps are taking part in the battle. On the last flank the 1st Corps held on to its position up to 15-00 hours. The corps was then withdrawn without sufficient reason (?!) to the Soldau area. Owing to this I have dismissed General Artamonov from the command of the corps, which has been taken over by General Dushkevick. In the centre the 2nd Infantry Division has suffered heavy losses, but the gallant Lebau Regiment has maintained its position at Frankenau. The Reval Regiment has been almost annihilated: the standard and one platoon have survived. The Estlandsky Regiment has withdrawn in great disorder to Neidenburg, where it has been reorganised in accordance with my instructions. At 11 a.m. the XVth Corps by my

¹ This is apparently an error for the 1st Reserve Corps. (Author's note.)

orders took the offensive against Hohenstein (?) and Mühlen, whither a brigade of the XIIIth Corps had been despatched. This attack has been crowned with success ; Mühlen was captured at 19-00 hours. A German withdrawal towards the outh-west has been observed. The remaining units of the XIIIth Corps have captured (?) Allenstein. The latest information with regard to the VIth Corps was received at 14-00 hours, to the effect that at 13-00 hours (?) it was at Srepanken, after experiencing heavy fighting on the 25th (?) 26th at Bischofsburg. 6875. Samsonov."¹

As we have seen above, the German Eighth Army had been concentrated on the battlefield in two groups ; the Southern, with a strength of $6\frac{3}{4}$ divisions had been despatched to strike a blow at the left flank and rear of Samsonov's army ; the Northern ($4\frac{1}{2}$ Infantry Divisions), to Bischofsburg, to inflict a separate defeat upon the isolated Russian VIth Corps. We have also seen how fortune favoured Hindenburg, revealing to him all the secrets of the situation, including even the intentions of the enemy. These conditions could not fail to facilitate the framing of his plans and the methodical conduct of operations.

In contrast to the state of affairs we have seen on the Russian side, where each corps was fighting "its own separate battle," in studying the German side we find an army battle on the front Soldau-Hohenstein strategically directed from above. Therefore in studying the German operations of the 26th and 27th, we shall apply a method differing somewhat from that used in our account of the operations on the Russian side, considering the fighting on the line Soldau-Hohenstein as one integral army battle, and not as separate corps engagements. To commence with the 26th August.

The offensive of the 1st German Army Corps, with Mülmann's Brigade attached to it, commenced at dawn. The units of the corps had not yet all had time to arrive, and in the morning the corps was short of about two regiments of infantry, sixteen field and four heavy batteries. The energetic way in which the railway was exploited, to expedite the completion of the assembly of the corps on the battlefield, was a tribute to German Staff efficiency.

¹ This telegram is quoted by Vatsetis on p. 87 of his work "Operations of the First and Second Russian Armies and the Eighth German Army." The marks of interrogation are the author's.

The 1st Infantry Division was sent to the heights to the north-west of Seeben and Usdau; the 2nd Infantry Division to Gross Taursee *via* Gross Koschlau; Mühlmann's Brigade to Heinrichsdorf and on to Borchersdorf. Although, as we know, only advanced units of the Russian 24th Infantry Division were on the line Seeben-Gross Koschlau, nevertheless the German infantry progressed with difficulty, as their "artillery fire was weak," as a German historian writes.¹ The advance went very slowly: General François, the Commander of the 1st German Corps, considering that "to conduct an attack without the active co-operation of the artillery would be folly,"² telephoned to the Staff of the Army, requesting them to leave it to him to fix the time for the commencement of the further offensive against Usdau. It will be recalled that the Eighth Army Orders for the 26th August had given a time-limit, namely, that the general offensive against Usdau was to be commenced by the 1st Corps from Seeben by 10 a.m. At 9 a.m. the following telephone message was transmitted from the Staff of the Army: "The Army Commander cannot delegate to the Commander of the 1st Corps the right to settle the time of attack, as the decision regarding this question does not depend alone upon the operations of the 1st Corps. It is proposed to fix 12 noon as the time for the commencement of the offensive. The 1st Army Corps should report all arrivals of artillery units." At 10-30 a.m. the following order was transmitted from the Staff of the Army: "The 1st Army Corps will commence the offensive previously ordered at 12 noon."

But the Russian advanced position at Seeben and Gross Koschlau was captured by the divisions of the 1st German Corps only at 3 p.m. Thus Hindenburg's orders to commence the offensive from Seeben against Usdau at 12 noon were not fulfilled. By evening General François' units had only reached the line Grieben-Grallau-Heinrichsdorf.

The progress of the struggle in this sector of the battle is very interesting in two regards. Firstly, it is once more demonstrated to what an extent modern tactics have come to depend upon the use of guns. Here also, as in the battle of Gumbinnen, the German offensive met with no decisive success, because the German Infantry

¹ Schwarte, "Der Gross Krieg 1914—1918," p. 298.

² General François, "Marneschlacht und Tannenberg," p. 206.

attack was not accompanied by a huge superiority over the enemy in artillery fire. Actually on comparing relative strengths in the different sectors of the battle, we obtain the following figures :—

A.—In the Montowo-Usdau sector.

Germans.	Russians.
The 6 regiments of the 1st and 2nd Infantry Divisions....1½ divisions.	The 24th Infantry Division....1 division.
12 batteries of field artillery ....12 batteries.	The 24th Artillery Brigade....6 batteries light guns.
	The 1st Field Howitzer Group .....2 batteries light howitzers.

B.—In the Lautenburg-Heinrichdorf sector.

Germans.	Russians.
The 5th Landwehr Brigade (General Mühlmann)....½ division.	One brigade of the 22nd Infantry Division.....½ division.
1 field battery.....1 battery light guns.	One Group of the 22nd Artillery Brigade 3 batteries light guns.
4 heavy batteries....4 batteries heavy guns.	

That the Germans nevertheless succeeded in advancing is explained in a considerable measure by the fact that the Seeben and Gross Koschlau area was only a Russian advanced position.

The battle of the 1st German Corps on the 26th August is also interesting in another regard. We have seen that both Hindenburg and Ludendorff, previous to their first experience of a "genuine" modern fire combat, similarly to all the Russian leaders, had failed to appreciate the extent to which artillery fire has grown in tactical importance in the modern battle. The words "experience of a 'genuine' modern fire combat" can be applied to General Ludendorff, for his exploits, which he himself recounts in his memoirs, when at the taking of Liege, with one Non-commissioned Officer in a car with him, he claims to have captured the citadel, could have provided him with no experience of the conduct of a modern fire combat. This lack of appreciation of the tactical importance of artillery fire also resulted in the failure on the part of one of the best German first-line corps to gain their objective for the day. In his memoirs¹

¹ Ludendorff, "Meine Kriegserinnerungen," p. 39

General Ludendorff masks this error under the following words : "The attack by the 1st and XXth Corps ought to have been postponed to the 27th August. It was my desire for it to take place earlier, but the 1st Army Corps was not yet ready; the East Prussian railway system was very unsatisfactory (?!). General François, who was in command of the 1st Army Corps, quite rightly pointed out the necessity for having the whole corps assembled before the attack."

In fulfilment of Eighth Army Orders dated the 25th August, the Commander of the XXth Corps, to assist the debouchment of the 1st Army Corps from the line of lakes between Gilgenburg and Lautenburg, could not commence operations before the 27th. It was composed of units of the XXth Corps: six battalions one squadron and one artillery Group Regiment. General Scholtz from the morning held both the active divisions of his corps in readiness for a general advance on the front between lakes Gross Damerau and Mühlen. The forward march of these two divisions at the hour specified by the Army Command brought them into collision with the 2nd Russian Infantry Division. The right hand division—the 41st Infantry—attacked Jankowitz with its right flank. In the Gross Gardienen-Thurau area it literally crushed the Russian 2nd Infantry Division with its artillery fire. Against the three Russian field batteries with the brigade of the 2nd Infantry Division, it put into action its twelve field batteries, reinforced by a battery of corps heavy artillery. The gallant deeds of the Reval and Estlandsky Infantry Regiments gave the Germans the impression that in this sector of the battle the Russians were far stronger than was the actual case. Proof of this will be found in the Eighth Army Orders issued by Hindenburg at 9 p.m., on the 26th August; we will refer to these later.

The Germans derived the same impression from their collision with the 1st Brigade of the Russian 2nd Infantry Division. Although here also there was a superiority in strength on the side of the Germans, as the 75th Brigade of the 37th Infantry Division, which took part in the attack against the Russians, possessed an artillery almost twice as powerful; their strength being seven battalions with eight field and one heavy batteries, yet, remembering their first encounter with the Russians at the battle of Orlau-Frankenau, the units of the 37th German Division operated with great caution. A further possible explanation of this fact is that the left flank of the German XXth

Corps had begun to feel the Russian pressure from the north of lake Mühlen. In this sector of the battle General Scholtz, the Commander of the XXth Corps, had in the Mühlen area the 73rd Brigade of the 37th Division and General Unger's Division, the latter division totalling twelve battalions with eight field batteries; in the Reichenau area the 3rd Reserve Division, with six field and one heavy batteries, was in complete readiness for the offensive against Hohenstein. Facing these infantry divisions on the front Stabigotten-Hohenstein Paulgut were units of the divisional cavalry of the XXth Corps, supported by advanced units of the 3rd Reserve Division and General Unger's Division. When he learnt of the offensive of the Russian XVth Corps against Hohenstein, General Scholtz did not proceed with the offensive of the 3rd Reserve Division against the same town; he ordered General Unger's Division to occupy a position on the bank of the river Drewenz between the villages of Mühlen and Nieder Wolla, and the 3rd Reserve Division was brought up into the Dröbnitz area.

On the morning of the 26th August the staff of the Eighth Army moved to Löbau.

In the afternoon news was received that the Russian IIInd Corps had reached Angerburg and apparently was assembling to march on Drengfurth. Orders were immediately sent to the 1st Cavalry Division to delay the advance of the Russian Corps. The Army Commander was also anxious about his right flank. The Russian 15th Cavalry Division had broken through between Strasburg and Lautenburg and was threatening both the lines of communication of Mühlmann's Brigade and the railway line Thorn-Osterode. The Commandant of Graudenz was ordered to increase the forces guarding the railway by a few more battalions.¹ In the evening news of General Rennenkampf's army was received. His infantry had reached the line Gerdauen-Taplacken (north-east of Wellau). Strong Russian cavalry units had reached the rivers Deime and Alle, and moreover one of the enemy cavalry divisions had moved from Gerdauen to Schippenbeil.

In the evening news was also received of the arrival and detrainment of Russian reinforcements at Mlava.

¹ Schwarte, p. 300

During the day reports were received from the XVIIth and Ist Reserve Corps, stating that they had engaged battle at Bischofsburg with the VIth Russian Corps, and that the fighting was pursuing a favourable course. General Hindenburg held to the previous plan of operations, which could not be carried out on the 26th. At 9 p.m., he issued the following Army Orders for the 27th August :—

(1) The XVIIth and Ist Reserve Corps are in action at Bischofsburg, with their front facing South, opposite the VIth Russian Corps; to-morrow, the 27th August, they are continuing their advance.

Behind them at Gerdauen, is the left flank of the Vilno army.

(2) To-morrow, the 27th August, two German brigades are detraining at Osterode.¹

(3) The enemy grouping in front of the reinforced Ist and XXth Army Corps is apparently as follows : a strong group at Borchersdorf, one division at Usdau and one-two corps densely concentrated (" dicht massiert ") in the Gross Gardienen-Waplitz area; Russian forces are advancing on Allenstein from Kurken and from eastward of that town.

(4) The reinforced Ist Army Corps and the reinforced XXth Army Corps at 4 a.m., on the 27th August, will commence the attack which is to be driven home with the greatest energy :

The Ist Army Corps sharply echeloned on the left, against Usdau.

The XXth Army Corps, supporting the offensive of the Ist Army Corps by a vigorous attack towards Usdau, in addition to continuing its offensive on its previous lines of operations.

After the capture of Usdau, the flank of the enemy forces operating against the XXth Corps must be turned from Usdau. With this object the Ist Army Corps is ordered to send the largest force possible to Neidenburg. At the same time the Ist Army Corps is made responsible for guarding the flank in the Borchersdorf direction.

(5) The 3rd Reserve Division is to advance on Waplitz, taking every precaution necessary to retain hold of Hohenstein.

These orders are extremely interesting as they show that the Staff of the Eighth German Army on ceasing to intercept Russian

¹ General von der Goltz' Landwehr Division—(Author's note).

operation orders, sent by wireless, getting back to the normal conditions under which one has always to work, had begun to misconceive the grouping of the Russian forces. It will be seen that even the General Staff of the Eighth Army, excellent as its organisation was, was not in a position to compose a wholly accurate picture of the situation. The Germans supposed two Russian corps, the XVth and XXIIIrd, to be concentrated in the Gross Gardienen-Waplitz area. They also supposed that a turning movement was being executed from the north, by the 3rd Reserve Division through Hohenstein upon Waplitz, and from the south, through Usdau upon Neidenburg. Incidentally, as we know, the Russian XVth Corps had already moved to Hohenstein, and had assembled for a wheel to the right, in order to attack on the following day the German positions on the bank of the river Drewenz, but between lake Mühlen and Usdau a gap had been formed twenty-twentyfive versts wide, protected only by the remnants of the 2nd Infantry Division, with a total strength of less than one brigade!

This mistaken appreciation of the situation by Hindenbrug and his staff had its inevitable effect upon the course of the battle of the 27th August.

At dawn on this day the offensive of the 1st German Army Corps was renewed. At 4 a.m., both General François' first-line divisions, now at full establishment, delivered an attack against the Russian position at Usdau. The 2nd Infantry Division was directed against the Russian front between Gross Tauersee and Usdau; the 1st Infantry Division attacked the right flank of the Russian positions sited between Usdau and Wilhelmshof, turning this flank from the north-east. General Schmetau's detachment continued the line of the 1st Infantry Division on the left, extending the German out-flanking movement. As already stated, a decisive battle was being fought on the front Wilhelmshof-Usdau-Gross Tauersee by the 24th Infantry Division, reinforced during the fighting of the 27th August by one brigade of the 22nd Infantry Division from the Corps reserve at Frödau, and by the 1st Howitzer Field Group. The Russian forces thus totalled: one and a half infantry divisions with eleven batteries of field artillery, whilst the strength of the attacking Germans amounted to two and a half infantry divisions with twenty-eight field and eight heavy batteries.

This gave the Germans a more than triple superiority in fire to aid their turning movement, a superiority so overwhelming that it was

bound to have its effect before long, and however critical one may be regarding the operations of the 1st Army Corps on this day, one must in justice acknowledge the fact that the Russian troops by remaining in the positions occupied by them were committed to inevitable defeat. In this connection it is of interest to note that the estimate given by German historians of the opposition offered by the Russian troops in this battle does not accord with the opinions expressed in such Russian criticisms as have appeared up to date.

The words appearing in the above-quoted report of the Staff of the Second Army, timed 11-30 p.m., of the 27th August provide an example: "...the corps was then withdrawn without sufficient reason to the Soldau area.....".

The German artillery, developing an intensive fire upon the whole front, easily crushed the weak Russian artillery. Nevertheless, the Russian infantry continued to offer a stubborn resistance. About 11 a.m., followed the storming of the right flank of the Russian corps, simultaneously from the west and the north. The Russian troops began to retreat on Soldau in disorder.

While the struggle on the left flank of the 1st German Corps was in progress, Mühlmann's Brigade was advancing from Heinrichsdorf with one field and four heavy batteries.

As already stated, the brigade of the Russian 22nd Infantry Division which was facing General Mühlmann with its three light batteries, had been reinforced on the morning of the 27th August by the 1st Rifle Brigade with three field batteries which had just arrived from Mlava. Thus, in this sector of the battle, with the fire strengths equal, the advantage in numbers of infantry lay with the Russians.

Mühlmann's Brigade, attacked by Russian infantry supported by a vigorous artillery fire, assumed the offensive and held out stubbornly at Heinrichsdorf. But to the north of Heinrichsdorf the flanking blow of the Russian rifleman fell upon the right wing of the 2nd German Infantry Division (specially upon the 44th and 4th Grenadier Regiments) from Skurpien to Wesselowo-Ruttkowitz. Here panic broke out amongst certain German units, and on their lines of communications. The 2nd Battalion of the 4th Grenadier Regiment fled back in panic twenty-five versts to the station of Montowo. The machine-gun company of the 4th Grenadier Regiment, the machine-gun company of the 44th Regiment and two squadrons of the 10th Mounted Jaeger Regiment (the divisional cavalry of the 2nd Infantry

Division) also joined in this panic flight. In recounting this incident, General François¹ ascribes it to the nervousness of the battalion commander, who, after this, he adds a few lines lower, comported himself gallantly in the succeeding battles. The important point for us is of course not the fact that there were in the German army, equally with all others, people of weak nerves, but the moral effect produced by a Russian attack carried out under conditions of equal fire strength. It is no less important to note that the moral influence of the Russian success against the right flank of the Ist German Army Corps had its effect also upon the higher chain of command right up to the Staff of the Army. General Ludendorff in his memoirs describes the incident with the 2nd Battalion of the 4th Grenadier Regiment as follows.²

"On our return³ we learnt that the Ist Army Corps had been defeated and was retiring on Montowo. It seemed unlikely that this information could be correct. We rang up on the telephone the Commandant of Montowo station. Units of the Ist Corps had in actual fact turned up there and were being assembled. But it was quickly ascertained that this was only one battalion, which had got into a difficult position and had given way. New anxiety was caused by the sight of carts going back at full gallop through Löbau. The regimental commander is placed under a great strain. He must keep a tight hold on his nerves"—Ludendorff thus sermonises upon this incident.

It has already been shown how sensitive the Germans were during the whole operation with regard to their right flank, fearing the appearance from the direction of Mlava of Russian divisions concentrated at Warsaw and Novogeorgievsk. In consequence of this the first news received from General Mühlmann of the difficulties with which he had met resulted in very important strategic alterations, taking the form of the cancellation of the advance to Neidenburg on the 27th of units of the Ist Army Corps ("...the largest forces possible....", as had been set forth in Army Orders dated the 26th August). The units of the Ist German Army Corps with Mühlmann's Brigade and Schmetau's Detachment were now sent against the Ist Russian Army Corps to throw it back behind the river Neide.

¹ "Marheschlacht und Tannenberg," pp. 213 and 214.

² Ludendorff, "Meine Kriegserinnerungen," p. 41.

³ To the Staff of the Army, which was at Löbau.

Thus, despite the complete defeat of the right flank and centre of the 1st Russian Army Corps, the activity displayed by it on its left flank for 24 hours distracted the attention of the Germans from the wide gap which had been formed in the direction of Neidenburg. The gallantry of the Russian troops and their immediate commanders in the field neutralised as far as might be the effects of the strategic ignorance of the higher command.

The better to elucidate events, we must now digress and describe the operations in the battle area north of lake Mühlen, returning thereafter to the events which took place in the centre.

On the morning of the 27th August the left flank of the XXth Corps, on the bank of the river Drewenz, was attacked by the Russian XVth Corps. Unger's Division was on the defensive between the villages of Mühlen and Nieder Wolla; to the north-west, between Nieder Wolla, and Kirsteinsdorf, the 3rd Reserve Division had deployed, to prevent the Russians from succeeding in turning General Unger's left flank, as they threatened to do.

On the 27th August the relative strengths of the two sides in the area to the north of lake Mühlen were thus as follows :—

Germans.

Russians.

The 147th Regiment (2 battalions plus 2 companies of the 150th Regiment and 1 company of Landwehr).

The XXth Corps—2 infantry divisions with 12 batteries of field guns and 2 batteries of field howitzers.

The 70th Landwehr Brigade—2 Regiments.

Zemmer's Brigade—2 Regiments.

Total—5 Regiments with 8 field and 2½ heavy howitzer batteries.

Total—2 infantry divisions with 14 batteries of field artillery.

The 3rd Reserve Division—4 Regiments with 6 field batteries—i.e., 9 Regiments with 14 field and 2½ heavy batteries.

In addition during the second half of the day, a brigade of the 1st Infantry Division (XIIIth Corps) arrived with three field batteries, but it took no actual part in the fighting.

The 3rd Reserve Division never opened fire, and thus in this sector of the battle, as also on the left flank of our 1st Corps, the Germans had no superiority in fire strength; there was here a slight advantage on our side, and the Germans experienced great difficulties.

In the history of the War edited by Schwarte,¹ it is stated that the Russians attacked in the Mühlen area² after intense artillery preparation. About noon the impression arose in the German Higher Staff that the situation at Mühlen was becoming threatening. Reports had been received that the enemy had broken through the positions and captured Mühlen, and that General Ungers Landwehr had given way. Owing to the impression produced by this information the 37th Infantry Division, which had been sent to Waplitz by the Commander of the XXth Corps, in accordance with Army Orders of the 26th August, was turned back and hurriedly despatched to Mühlen. One of the brigades of the 3rd Reserve Division, which had been in reserve behind the left flank of the German positions on the river Drewenz, was also sent here. However, the intervention of these forces was not required; Unger's Division withheld the pressure of the Russians, and even drove them out of Mühlen.

However, the result of the energetic operations executed by General Martos and of the valour of his troops was similar to that in the Southern sector of the battle. The German line had withdrawn one of the first-line divisions (the 37th) which had been sent into the gap formed between the XVth and 1st Russian Corps. The Russian troops by their gallantry on the battlefield again deferred the strategic catastrophe impending.

To return now to the centre.

The Commander of the XXth Army Corps, in fulfilment of Army Orders of the 26th August, which had instructed him to support the offensive of the 1st Army Corps in addition to continuing his offensive on the previous lines of operations, detailed Schmetau's Detachment to carry out the first part of the task, and to fulfil the second part ordered the 37th Infantry Division to advance in the direction of Wronowo, and also the 41st Infantry Division, in the direction of Adl. Kamiontken. The 1st Brigade of the 2nd Infantry Division, which

¹ "Der Grosse Krieg 1914—1918" Schwarte, p. 302.

² Along the railway embankment $1\frac{1}{2}$ kilometres to the north of Mühlen (against the 5th Landwehr Regiment).

had been mauled the day before and had retreated to Janushkau, was on the line of advance of the first of these ; it could not offer any serious resistance. On the line of advance of the 1st Division at Lippau were the remnants of the 2nd Brigade of the 2nd Infantry Division, useless for fighting, thinly covered by the right flank of a brigade of the 6th Cavalry Division. On this day the 2nd Brigade of the 2nd Infantry Division was so incapable of fighting that at the very first pressure from the 41st German Infantry Division it poured back in disorder to Neidenburg. The offensive of the 37th and 41st German Divisions developed but slowly. The incorrect information given by the Staff of the Eighth Army in orders for the 27th August, wherein it had been supposed that there were one-two Russian corps "densely concentrated") present in the Gross Gardienen—Waplitz area, had its effect, and both divisions, especially the 41st failed to perceive that the front was open to them. There was here a repetition, but this time on the German side, of the same phenomenon which has been mentioned with regard to the divisions of the First Russian Army on the 21st August on the battlefield of Gumbinnen.

About noon General Scholtz, the Commander of the XXth Corps, received the following orders from the Staff of the Army :

Gilgenburg, 27th August, 11-30 a.m.

The 1st Army Corps and Schmetau's Detachment are to throw the enemy back behind the River Neide in the direction of Soldau-Klein Koslau.

The XXth Army Corps, including Fröda's Detachment, is to turn northwards on passing east of lake Kownatken, in order to cut the southward line of retreat of the enemy forces there.

From these orders it will be seen that the attacks of the XVth Russian Corps on the river Drewenz had opened the eyes of the Staff of the Eighth Army to the true grouping of the Russians. The execution of this order coincided with the withdrawal to Mühlen of the German 37th Infantry Division, under pressure of the attacks of the Russian XVth Corps. In consequence the 41st Infantry Division, which had been sent to Waplitz, marched, not to the east, but to the south of lake Kownatken, and by evening had only reached Thurowken.

Thus on the 27th August the Germans had failed to penetrate into the gap open between lake Mühlen and Usdau, 20—25 versts wide, and the road junction of Neidenburg extremely important strategically, remained unoccupied by them.

On the 26th August, as we have seen above, the Germans had inflicted a decisive defeat upon the Russian 4th Infantry Division. From intercepted Russian radiograms communicated to them by the Staff of the Eighth Army, the Staffs of the 1st Reserve and XVIIth Army Corps were aware of the exact grouping of the Russian troops in the Bischofsburg area. Evidence of this is given in the orders issued by the Commander of the 35th Division at 10-50 p. m., on the 25th at the bivouac in Gross Schwansfeld.

“The three enemy corps attacking the XXth Corps have been repulsed at Bischofsburg, there is apparently one enemy corps, the advance units of which have occupied Gross Bössau; there appears to be enemy cavalry at Sensburg. The XVIIth Corps, in conjunction with the 1st Reserve Corps and the 6th Landwehr Brigade, which is at Lautern, will advance to-morrow in the direction of Bischofsburg, in order to attack the Russian Corps. The corps will advance by one road, the 36th Division leading, with the 35th Division following. Second category transport at Gollingen; third category—of the 36th Infantry Division, at Legienen—of the 35th, *via* Bartenstein and Reddenau to Heilsberg.”

The offensive against the Russian VIth Corps was thus organised by the Germans: one division of the XVIIth Corps (the 36th) was to deploy for attack in a southward direction in the area to the east of lake Gross Bössau; one division of the 1st Reserve Corps (the 36th Reserve) together with the 6th Landwehr Brigade, was to deploy between lakes Gross Bössau and Dadey to attack the Russians from the west. The second division of the XVIIth Corps (the 35th) was to follow after the 36th for the further outflanking of the Russians from the east; similarly the second division of the 1st Reserve Corps (the 1st Reserve was to be sent eastward to lake Dadey to turn the Russian position from the west. The Germans were thus endeavouring to take advantage of their huge superiority in strength and completely surround the Russian VIth Corps. This superiority was in actual fact very large. Four and a half German divisions, with forty-four batteries (of which eight were heavy) were despatched against two Russian divisions

with thirteen batteries of field artillery, giving them a more than triple superiority in fire strength.¹

We know the result of the VIth Corps battle from the description already given. Knowing now the relative strengths, one can only be amazed that the result was less than might have been expected. This was owing to the gallantry displayed by the Russian 4th Infantry Division, and also owing to its skilful conduct of the battle. The Germans themselves testify to the stubborn resistance offered by it. The concentric offensive of the units of the XVIIth Army Corps from the north of the 1st Reserve Corps from the West caught the Russian 4th Infantry Division between two fires. The Russian division commenced to retreat in disorder, leaving on the battlefield its wounded and some of its batteries (according to our sources of information—two batteries, according to the German—thirty guns). In any case the picture of the defeat inflicted upon the Russians must have become suddenly clear to the German Command. The XVIIth Corps was halted in the evening in the area of Gross Bössau, the 1st Reserve Corps on the northern shores of lake Dadey. The Commander of the 1st Reserve Corps, General Belov, stated that he had received information to the effect that the Russians were preparing to make another stubborn stand a few versts south of Bischofsburg. There is a psychological reason for the caution displayed by the Germans, though possessing an overwhelming superiority in strengths, and having just inflicted a defeat upon the Russians. Their corps commanders remembered only too well the lesson taught them by the Russian troops at Gumbinnen for despising their fighting quality. As the saying has it: "once bitten, twice shy." General Belov and General Mackensen prepared for a deliberate offensive on the following day against the new Russian position, and meanwhile the VIth Corps escaped from under their blows, while the Russians were given every opportunity to retreat not only on Ortelsburg but also on Passenheim.

¹ It is of interest to give here the German losses,—

XVIIth Corps, 36th Div.—8 officers and 191 other ranks killed and wounded.

35th Div.—no losses.

1st Reserve Corps, 36th Res. Div.—(69th Br.—18 Os. 1020 O. Rs.

70th Br.—2 Os. 20 O. Rs.

6th Landwehr Brigade 38 Os. 20 O. Rs.

This battle of the 36th Division is called by the Germans "Ninhaltendes Gefecht". The whole stress of the battle fell upon the 69th Reserve and 6th Landwehr Brigades.

On the morning of the 27th August the 1st Reserve and XVIIth Army Corps began their manoeuvres against the imaginary Russian position to the south of Bischofsburg. The XVIIth Army Corps was sent direct to Bischofsburg for a frontal attack ; the 1st Reserve Corps marched west of lake Dadey, in order to turn the Russian left.

In traversing the battlefield of the previous day, the XVIIth Army Corps could see from the evidence of its own eyes what heavy losses had been inflicted upon the Russians. At 9 a. m. it occupied Bischofsburg, and it gradually became clear that there were no Russian forces to the south of Bischofsburg.

At 12-30 p.m., the Commanders of the XVIIth and 1st Reserve Corps received by telephone orders from General Hindenburg, timed 7-30 a.m. ; " As soon as you have finished with the enemy defeated yesterday, march on Jeduabno." In fulfilment of this order the XVIIth Corps moved the 35th Division on Passenheim, and the 36th on Mensguth. By night Passenheim had been occupied by the advance guard of the first, and Mensguth by the advance guard of the second.

Shortly after the receipt of the orders quoted above " to march on Joduabno," the 1st Reserve Corps received new instructions from the Staff of the Army, conveyed by General Drexel of the General Staff. By these new orders the main body of the 1st Reserve Corps was instructed to move to the Patricken—Gross Purden area ; the Staff of the Eighth Army was thus closing in one of its left flank corps for operations in conjunction with the centre of the army. By disposing the 1st Reserve Corps for the night, 27th August, in the area Patricken—Gross Purden, the Staff of the Eighth Army was in a position to move this corps next to Kurken, Stabigotten, or Allenstein, as the situation might require.

By the evening of the 27th August, the 1st Reserve Corps had reached its night quarters in the area specified for it.

On the 27th before receiving the report of the retreat of the 1st Army Corps from Usdau, the Commander of the Russian Second Army had issued the following operation orders for the 28th :—

" To-day, the 27th August, the 1st Army Corps has been fighting on the front Usdau—Heinrichsdorf—Gross Lensk, and the German attacks have been repulsed. The 2nd Infantry Division after stubborn fighting at Janushkau has occupied a position at Frankenau. The XVth Army Corps has occupied the village of Mühlen and the forest

of Walsdorf. A brigade of the XIIIth Army Corps is on the extreme right flank of the XVth Corps. The remaining units of the XIIIth Corps are occupying Allenstein.

"On the 28th August the 1st Corps, must at all costs, maintain its position in front of Soldau, in order to safeguard the left flank of the army. The XXIIIrd Army Corps (the 2nd Infantry Division and those units of the 3rd Guards' Division which have come up),¹ must at all costs maintain their position on the front westward of the village of Frankenau. A brigade of the 6th Cavalry Division² is being placed under the orders of the Commander of the XXIIIrd Corps.

"The XIIIth and XVth Corps, under the general command of General Martos, at dawn are to assume an energetic offensive in the general direction of Gilgenburg—Lautenburg, with the object of attacking in flank and rear the enemy forces opposite the XXIIIrd and 1st Army Corps.

"The VIth Corps is being transferred to the Passenheim area."

On studying this order with the map the student will be amazed to find the amount of careless thinking displayed in the work of the staff. The Staff of the Second Army was already well aware of the defeat of the 2nd Infantry Division. Consequently, even supposing that the Operations Branch of the General Staff had been misled by the morning's reports from the Commander of the 1st Army Corps, with reference to the strength of his position at Usdau, it yet seems quite inexplicable that General Artamonov's Corps should have been considered as guaranteeing the safety of the flank of the army, when a gap 15—20 versts wide had formed between Usdau and Frankenau. It was proposed that the XVth and XIIIth Corps should render active assistance, namely, by an "energetic offensive" in the general direction of Gilgenburg-Lautenburg, with the object of attacking in flank and rear the enemy forces opposite the XXIIIrd and 1st Army Corps. The simple use of a pair of compasses would have demonstrated to the staff that the line of operations Mühlen-Gilgenburg-Lautenburg was 40 versts distant as the crow flies. Pressure on their flank and rear sufficient to have a real effect upon the Germans operating against the 1st and XXIIIrd Russian Corps could only become operative on reaching the Gilgenburg area, *i.e.*, in the case of a success

¹ The Kegsholmsky Lifeguard Regiment with one battery of the 3rd L. G. Artillery Brigade. (Author's note).

² General Shtempel's Brigade. (Author's note).

on the part of the XVth and XXIIIrd Corps, developed to a depth of 15—20 versts. This demanded a victory not only decisive, but also at a lightning stroke, on the part of General Martos' group, or the alternative would be several days' fighting. From the preceding description we know that the Germans, with a more than *triple* superiority in strength, had spent two whole days in inflicting a defeat and progressing as far as Mensguth. Not only was it impossible for General Martos, even after the arrival of all the units of the XIIIth Corps to join him, to have any such superiority in strength, but, further, there were absolutely no general grounds for reckoning on any advantage whatsoever over the Germans. Affairs turned out even more badly in the event. The 1½ Infantry Divisions of the XIIIth Corps, utterly worn out, spent the night 27th-28th August at Allenstein, 35 versts as the crow flies from Mühlen, at that moment the most important point for the XVth Corps to occupy for the battle. Consequently there could be no question of the XVth and XIIIth Corps on the 28th August "assuming at dawn an energetic offensive in the general direction of Gilgenburg—Lautenburg, with the object of attacking in flank and rear the enemy forces opposite the XXIIIrd and 1st Army Corps," as had been required by the Operations Orders of the 28th August.

On the evening of the 27th August the Staff of the Second Army had already learnt the news of the retreat of General Artamonov's Corps from Usdau, as may be ascertained from General Samsonov's report to the Commander-in-Chief of the North-Western Army Group, timed 11-30 p. m. (telegram No. 6375, which has been quoted above in full).

How was it that even after this General Samsonov held to his previous decisions? He has borne this secret with him to the grave, and we can only guess at the reason. General Samsonov was by nature an extremely brave man. In the complicated situation in which he found himself, he was naturally drawn towards the execution of daring operations, which always lead to the swiftest and most decisive results. It is true that the decision embodied in Operations Orders for the 28th surpassed the legitimate bounds of daring; it was ill-judged. But to see this aright it was necessary to retain calmness of mind and clearness of judgment. General Samsonov had lost the first, and General Jilinsky, the Commander-in-Chief, had himself greatly contributed to the loss of it. For the loss of the clearness of

judgment of the Army Commander his immediate colleagues, *i.e.*, his staff, were responsible. We have purposely gone in detail into the questions of distance arising in connection with the operations ordered for the troops for the 28th August, in order to show that the staff had apparently made no calculations that had any foundation on the realities of the situation. The plan of operations had been framed without due consideration, not on the basis of a well thought out idea, but on the basis of a fleeting fantasy.

At 7-15 a.m. on the 28th August General Samsonov sent the Commander-in-Chief of the North Western Army Group the following telegram :

"The 1st Corps, badly disorganised, was yesterday evening withdrawn to Illowo by General Artamonov's orders, leaving a rearguard in front of Soldau. I am now proceeding to the Staff of the XVth Corps at Nadrau, to take control of the corps in their offensive. I am removing the Hughes apparatus.¹ I shall be temporarily without communication with you."

This decision on the part of General Samsonov might be likened to the action of a commander of a cavalry regiment in placing himself at the head of a group of squadrons for the personal conduct of a cavalry charge. It seems unnecessary to point out how far this was from being in accord with modern requirements regarding the control of an army. We repeat : this action on the part of General Samsonov can only be explained by his character. But what is difficult to explain, is why the departure of the Army Commander for the forward area should involve the breakdown of communication ("I am removing the Hughes apparatus. I shall be temporarily without communication with you"). Apparently the Staff of the Second Army—for the maintenance of communication is intrinsically a part of the functions of the staff—was ignorant of the elementary rule that a signals station once working must only be closed down after the opening of a new station in closer touch with the new command post. The ignorance of the Staff of the Army accentuated the consequence of General Samsonov's decision to visit the Staff of the XVth Corps. With his departure from Nadrau the army ceased to be under his control. *The disaster to the army commenced from this moment.*

While *en route* from Neidenburg to Nadrau, at 9 a.m. on the 28th August, from Allendorf (one verst North-East of Orlau) General

¹ Telegraph apparatus (translator's note).

Samsonov reported to General Jilinsky: "On the road from Neidenburg to Nadrau I have received a report from Colonel Zalesky,¹ to the effect that at 6 p.m. yesterday the enemy attacked the advanced units of the VIth Corps. The Corps retired southward of Ortelsburg to the village of Wallen-Olschienen. The 4th Cavalry Division is at Grammen on the Fassenheim-Ortelsburg main road). The corps has suffered heavily, especially the 4th Division, which is weakened both physically and in morale. According to the statement of an officer eye witness the corps retreated in disorder. I am riding to Nadrau, where I shall reach a decision with regard to which are maintaining the offensive. I have just received a report from the Commander of the XVth Corps. His report of yesterday contained an error, and Mühlen has not been occupied. Fighting is proceeding to-day to obtain possession of it. General Martos reports that his corps is greatly exhausted, and that a further advance to-day is impossible."²

General Blagoveshchensky, the Commander of the VIth Corps, received General Samsonov's order for the move of this corps to Passenheim only after 1 p. m. on the 28th August. But the divisions of this corps during the preceding night had completed the march from Mensguth to Ortelsburg, and it was impossible to get the exhausted infantry on the move before evening. But what was worse was that the control of the corps was in complete chaos, communication not having been established as yet between its units. It is at such critical moments that a lack of scientific training on the part of the personnel of the Higher Command shows itself most clearly. So it was in the present case. The defeat inflicted on the 4th Infantry Division at Bischofsburg had a stunning effect upon the Higher Command of the VIth Corps, which showed itself not only incapable of an independent appreciation of the situation which had arisen, but even proved incapable of executing the orders received from the Army Commander.

In the present case the essential point was not General Blagoveshchensky's failure to put the 16th Infantry Division into the battle

¹ The Commander of the 4th Novotroitsky-Ekaterinoslavsky Regiment, who had just taken up the duties of Chief of Staff of the VIth Corps. (Author's note).

² In view of the complete breakdown in signals communications, and in view of the presence of enemy patrols in rear, the following measures were taken to get this report to the Staff of the Army: a troop of Dragoons was despatched from Grammen at 2 a.m. on the 28th August by the Commander of the 4th Novotroitsky Ekaterinoslavsky Dragoon Regiment, as an escort with this message. Between 8 and 9 a.m. this troop was already with the Staff of the Army, having covered 60 versts in a period of 6 hours. Having received orders for the VIth Corps from the Staff of the Army, this troop immediately started back and returned to Valen at the same speed.

at Bischofsburg, but his failure to push on with the occupation, if not of Passenheim, then of Jedwabno, or at least of Willenberg, if only by the 16th Infantry Division. This was just what he had omitted to do ; neither on the night preceding the 29th August, nor in the course of that day, was the 16th Infantry Division moved into this area. This was more than a blunder—it was a crime.

To save the central corps of the Second Army forced marches by the left flank corps of Rennenkampf's army, extending to a hundred versts, and leading into a strategical trap, were by no means required ; all that was needed was an elementary knowledge of strategy on the part of the leaders of the VIth Army Corps.

The Staff of the Second Army had not informed the Staff of the XIIIth Corps of the defeat of the VIth Corps at Bischofsburg, nor had Army Orders of the 28th August been received ; in these General Klyuev, the Commander of the XIIIth Corps, would at least have found the laconic phrase : " The VIth Corps will move to Passenheim." General Klyuev, as already stated in the preceding chapter, had received instructions, in the form of a message transmitted by the Commander of the nearest division of the XVth Corps, to move on the 28th August the whole of the XIIIth Corps from Allenstein to Hohenstein.¹

During the night 27th-28th no fresh information concerning the enemy was received by the Staff of the XIIIth Corps. The patrol despatched to Wartenburg sent in no report.

" At dawn the XIIIth Corps was marched off in one column along the main road Allenstein—Hohenstein. One battalion was left in Allenstein, with orders to wait until all the transport had gone, and follow the column to Hohenstein.

" At first the movement proceeded without hindrance. The battalion commenced the withdrawal of its outposts, in order to follow the column to Hohenstein."

" At this moment the leading units of the German troops appeared simultaneously from the north and from the east. The units appearing from the east tried to cut the battalion's line of retreat from

¹ We will recapitulate the contents of this message : " By order of the Army Commander the XIIIth Corps is placed under the orders of the Commander of the XVth Corps. The Commander of the XVth Corps orders an immediate march to co-operate with the XVth Corps by directing a blow against the left flank of the enemy".

Allenstein. The troops became involved in street fighting. The battalion fought on energetically, but, cut off from the column and with all their ammunition exhausted, part fell fighting and part were surrounded and taken prisoners without having succeeded in warning the column of the attack." ¹

By this time the head of the XIIIth Corps Column was approaching Grieslienen. An officer of the General Staff of the XVth Corps went out to meet it, and reported that his corps was engaged in heavy fighting, while in the Mühlen area the battle continued to wax fiercer, and in view of the threat to his rear at Waplitz General Martos had been obliged to bring a brigade of the 6th Infantry Division, which had been in corps reserve, into action there.

Shortly after this it was learnt that communication between the XVth and XIIIth Corps had been cut by German cavalry, and an officer who had been sent by car to General Martos with further questions from General Klyuev could not at once get through. At the same time the advance guard of the XIIIth Corps became engaged at Grieslienen. General Klyuev issued orders for the deployment of the corps. The fighting quickly grew hotter, and the troops of the XIIIth Corps for the first time came to be acquainted with the "coal-boxes" of the German heavy artillery.

Nevertheless, General Klyuev and his troops continued heroically to execute the task imposed upon them.

The units of the XIIIth Corps advanced and obtained possession of the woods round Hohenstein, but they had not succeeded in taking Hohenstein by evening, and could only extend their left flank to the south of Hohenstein, in an endeavour to get into touch with the XVth Corps.

With the onset of darkness the fighting died down.

"General Klyuev's fears had been realised, the VIth Corps speaking roughly was penned in a *sac*: on the north-west, the north and north-east was the enemy; to the South—the lakes. The exits from this *sac* were: the Eastern, past the enemy towards Allenstein, and the Western, past the enemy at Hohenstein. This was the situation in which the corps found itself at dark."

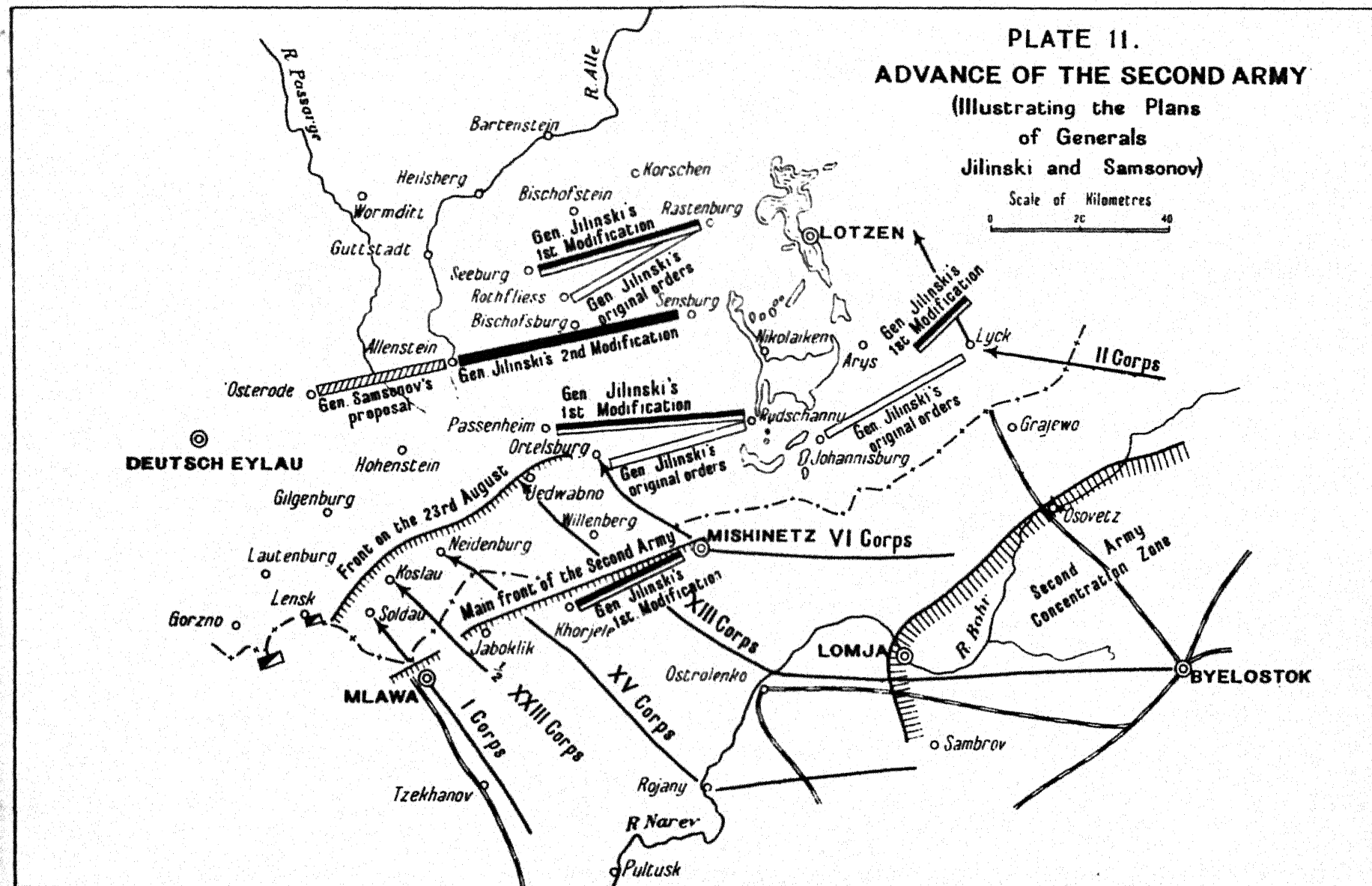
¹ "Brief outline of the operations of the Army of the Narev", by Fuchs, an officer of the General Staff of the XIIIth Corps; printed in "Voenny Sbornik", No. 4 (Belgrade).

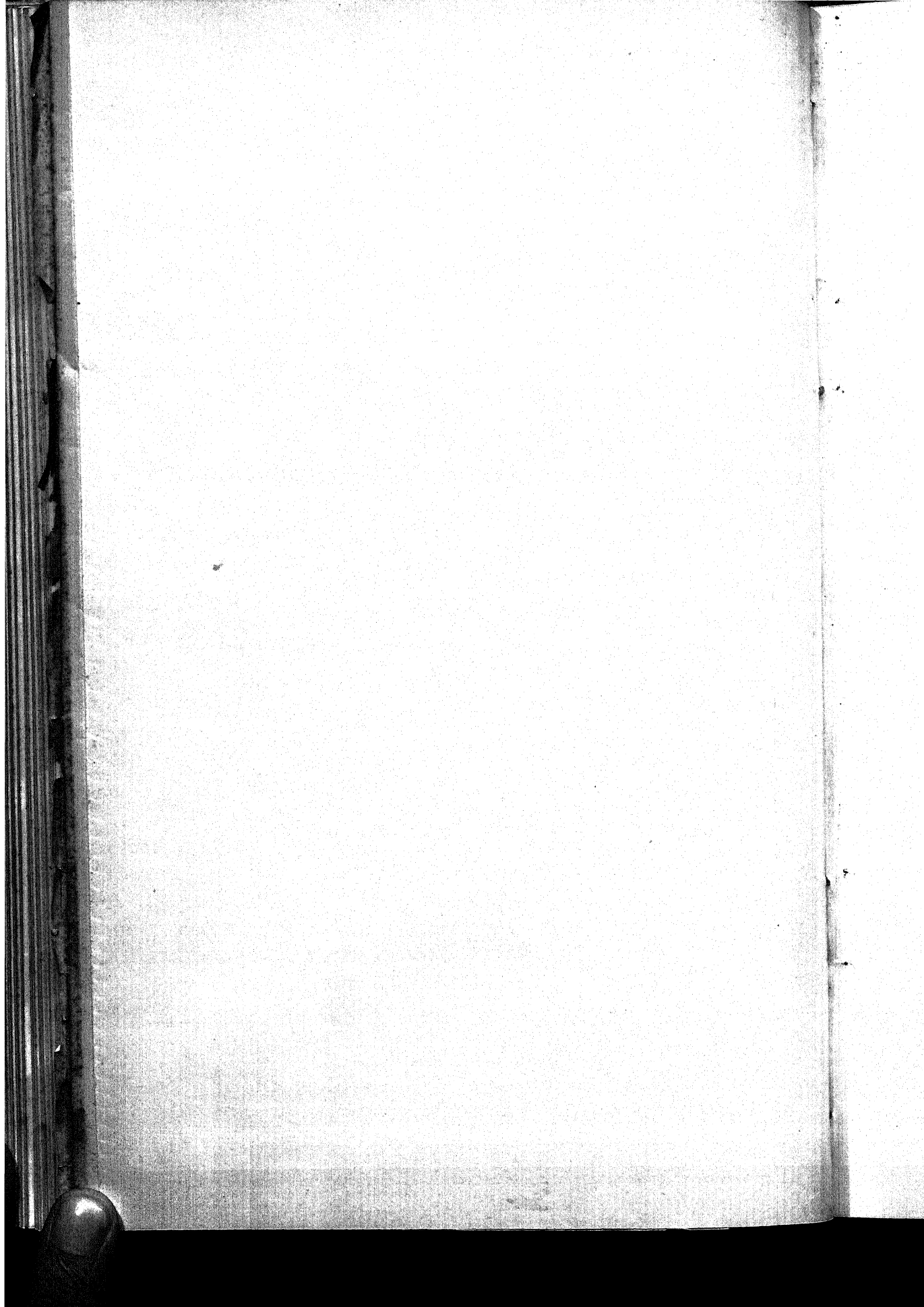
"The Commander of the XIIIth Corps decided to rest the troops, and during the night to move units, and especially rear formations (such as transport and sanitary services) towards the Western exit; to deliver an energetic attack at dawn, in order to advance westward, to get into touch with the XVth Corps and to make sure of a base for himself through the Western passage, to the south of Merken...."

About midnight orders were received from the Staff of the Army, by hand of a mounted patrol. They announced: "To facilitate the concentration of the units of the army and the maintenance of all categories of supplies, the XIIIth Corps is to retreat during the night to the Kurken area, making use of the passage between Lakes Gross Plautziger and Lansker. The XVth Corps is retreating on Neidenburg. The corps will be given further instructions at Kurken."

These orders, in common with the majority of the orders from the Staff of the Army, were already too late, and it was impossible to fulfil them. It was impossible to take the corps between the lakes named, with the enemy at Darethen, and in view of the fact that the Northern shores of the lakes were high ground, commanding the whole of the passage. One course remained: to try to get through the defile at Schwedrich, although, in view of the retirement of the XVth Corps this would also be difficult, for Merken was already in enemy hands.

The Commander of the XIIIth Corps decided to lead his Corps through this defile.





PACIFISM *v.* MILITARISM.

BY COLONEL F. DICKINS.

Recently a debate was held at a very well-known Union on the subject of Disarmament. The motion before the House was—that any further disarmament on the part of England would be dangerous to the peace of the world. It had been confidently expected that the motion would be easily carried, but, to the surprise of everybody, it was lost by a three to one majority. In the opinion of competent observers there was one principle reason for the defeat, and that was the extraordinary incapacity of the principal speaker on behalf of the motion. This gentleman, a retired member of one of the services with the magical letters M. P. after his name, delivered himself of a speech so poor, so flabby, so unconvincing, so elementary, pitched in so silly and sentimental a key, with no appeal of any sort to logic or reason, that his chief opponent, a prominent barrister, had no difficulty in knocking him out of the ring.

Here, perhaps, is disclosed one of the reasons why we find such hesitation on the part of legislatures to vote adequate supplies for the defence of the realm, and why the pacifist spirit is expanding to a degree which the militarist can only regard as unhealthy and dangerous. An audience will hardly be convinced of the justice of a cause if that cause is pleaded in so feeble a manner that they can only conclude that the cause itself must be a pretty bad one. It is no good trying to outrange heavy artillery with pop-guns.

Two questions will suggest themselves to the militarist, arising from a consideration of the results of this debate: the first—is there any necessity to try and prevent a repetition of such a fiasco? The second—if so, what steps should be taken towards that end, and by whom?

That section of society which considers that there is a definite limit to our national disarmament beyond which a really dangerous zone is entered, will emphatically answer the first question in the affirmative. Some there may be who consider that the opinions and judgments on such a subject of a few hundred adolescents in their early twenties is not a matter of great importance. But it should be remembered that these young men are representative of the most

intelligent and most capable of the younger entry. Among them are bound to be future statesmen, politicians, leaders of thought, leaders of industry, scientists, eminent professional men. If, at the most receptive stage of their lives, the whole youth of a nation are inculcated with ideas antagonistic to the ideas of those who distrust disarmament, then there is very little chance that the principles of the latter will be adopted by that portion of a people which carries most weight in the Councils of the State, and, consequently, by the Government itself.

If we can imagine discussions on this and kindred subjects multiplied all over the country, in private houses, in clubs, in schools and colleges, in railway carriages, in public houses, anywhere and everywhere where men and women, youth and age, fanaticism and careless indifference, meet together and settle the affairs of the world to their own satisfaction; if we can imagine this, it should be apparent that those ideas will receive the widest and fullest support which are most lucidly and informatively presented.

Now, it is hardly an exaggeration to assert that the services are inclined to surround themselves with a high-wire entanglement, and to disregard the existence of any worth-while life outside that entanglement. While those who live in the outer darkness, in their turn, utterly refuse to believe that any peculiar rays of enlightenment shine down on those inside the fence. Unfortunately, the control of these ring-fences, as regards scope and extent, lies entirely in the hands of the outer barbarians. In their own interests, the cloistered inhabitants of these enclosures might be well advised to put themselves in a position to be able to explain the reasonableness of their point of view in cases where it clashes with that of their controllers. It is no good blustering about it and damning the barbarians.

In the long run, Governments themselves, in civilised countries where public opinion is strongly entrenched and well-informed, are controlled by public opinion. Where no public opinion exists, any clap-trap will do. But in England, at any rate, you must be able to prove your arguments and marshal them skilfully if you are to bring public opinion to your way of thought.

If, then, the militarist, within his own little special ring-fence, is convinced that the doctrines of the pacifist, lost in the outer darkness, contain elements of danger to the State, it does not appear unreasonable to suggest that he might well take steps to counteract those

doctrines, and to justify his own principles ; to let a few strong rays from his own well-lighted perimeter pierce the surrounding gloom, to achieve which end he must supply himself with the best projectors.

The subject of War has ceased to be the particular concern of the professional soldier ; the whole nation is impertinently inquisitive about the business because modern war affects every individual of the nation directly and unpleasantly. The civilian is no longer merely a somewhat tolerant spectator : he is an intolerant, because disillusioned, participant. He will never again, as in the past, rely on the judgment of the soldier. He considers his own judgment just as reliable, and certainly the bickering and back-biting among experts that followed the War give colour to his views, while there is not an arm-chair critic who does not consider that, even in cases of major strategy, he would have avoided the ghastly mistakes of the War.

Certainly, the thoughtful militarist will answer the first question in the affirmative.

Before attempting to discuss the second question, perhaps it would be as well to examine the title of this article. It is most unfortunate that such odium should be attached to their opponents by each of two perfectly respectable schools of thought. It is deplorable that such insensate vilification should be employed by either school when referring to the other. After all, anybody is entitled to his own opinions, which can only be based on the interpretation that his own experience and information allows him to place on results and tendencies.

"Is there a damned fool at the end of the wire" asked the irate Admiral at the telephone. "Not this end," sweetly replied the operator. For the two parties to a dispute to damn each other's folly is not to advance a settlement of the point at issue. But that is just what the militarist and pacifist are both inclined to do.

What, exactly, is Pacifism ? What, exactly, is Militarism ?

There are fanatics in both camps. To the fanatical pacifist, the militarist is an inhuman, brainless monster, who glories in war for war's sake, and is never happier than when trampling on holocausts of slain, taking particular delight in slaughtering women and children. To the fanatical militarist, the pacifist is a namby-pamby individual, with long hair and a turn down collar, with a propensity to adopt red as his favourite colour, who, when attacked by a robber, is in the

habit of turning round and, coat-tails uplifted, inviting another kick, and who would rather see his family butchered than adopt violent measures to save them from disaster.

Between these two absurd extremes every shade and variety of opinion may be encountered, many of them suffering from the same diseases, namely, myopia of judgment and deficiency of information and applied intelligence. It is a further regrettable fact that some of the most vociferous of both schools are not inspired by sincere conviction, but by political prejudice, and even by a shabby desire for personal advertisement and advancement.

Those whose lives are circumscribed by the charmed, but restricted, circle of official service sanctity are not likely to have had much opportunity of meeting the fanatical type of either school. Officialdom is a poor sort of soil for fanaticism—even for enthusiasm. There exists, however, plenty of pacifist literature in all countries which is evidence of the width and depth by which this school of thought has expanded since the War, some of its propaganda being fanatical in the extreme. The evidence regarding the existence of any widespread adoption of extreme opposite views is not so manifest. Still, there is some evidence that in some countries, if not in England, extreme opposite views are held at least by individuals. Nor is the pacifist exaggerating when he points to the German student mensur, or duel, forbidden after the War, but revived since Hitler came into power, as a custom definitely within the bounds of militarism as defined by pacifism. Further, there is evidence that the doctrines of Bernhardi are not dead. And it must be remembered that pacifism is apt to term the Boy Scout movement as distinctly militaristic.

That there is, among civilised people, any general desire to engage in war for the sake of the spoils of war, is a little bit difficult to imagine. But the pacifist is firmly convinced that such is the case. That there are at least individuals who appear to exalt war to the status of a desirable cult cannot be denied. And it is the acknowledged existence of this exaggerated type which is the excuse for the pacifist's hatred of what he terms militarism. He goes so far as to produce evidence (of sorts) that armament firms have been known to blow on the glowing embers of war. Unfortunately, he has fastened the sins of a tiny minority on to the whole body of those who disagree with him in the matter of *Pacifism v. Militarism*.

Militarism is a complete misnomer for the vanguard of the pacifist's opponents. It almost amounts to defamation of character. Pacifism is equally inept as a description of those who merely want to see some sane control applied to armed strength. The real difference between the two schools, neglecting once and for all the fanatics of both, may be roughly summed up as follows. The militarist—the non-pacifist—denies that the world is yet ripe for the eradication of war, is doubtful whether it ever will be ripe, and does not consider that disarmament is a suitable, or even a possible, instrument for its eradication. The pacifist, who denies that war can serve any conceivably useful purpose, not without some historical justification, believes that the first and the most necessary step towards the eradication of war is the maximum, if not the total, disarmament of all countries. The militarist can conceive of problems of which war can be the only solution; the pacifist can conceive of no problem for which war can be a solution. The one debits all the troubles of the world to armaments and war; the other credits war to the troubles of the world. And to some degree both are right, for trouble-war-war-trouble is a vicious circle which no one has yet succeeded in breaking.

The militarist, then, believes that unrestricted disarmament is not only futile, but is dangerous to the peace of the world. Not only does it not fend off the danger of war, it positively invites it. Before the iron and bronze ages men had to fight with the weapons given them at birth—their hands. Remove the wholesome fear of the other fellow's weapons, and the stronger man would be free to strangle his foe with impunity. Without weapons war would be easier and cheaper, and, though it would be more local and on a smaller scale, it would be more endemic and more widespread. At present it is only sporadic epidemic. The above is quite a logical train of reasoning, but no patent is applied for. But he is even more convinced that disarmament can never be universal, simultaneous, omni-lateral, and so genuine. He stakes his money on the weakness of human nature, on its different levels of development in different countries.

The pacifist, however, believes that a graduated scale of disarmament, continued down to the ultimate zero, is the one radical cure for the disease of war. For the broadcasting of his theory he has devised a highly developed organisation, with well equipped speakers and writers. He stakes his money on the divinity that he sees in human

nature, and from the purely spiritual point of view his position is unassailable, and that is a very great initial advantage. It has the effect of appearing to put his adversary in the wrong at the very outset.

If, then, the militarist desires to combat successfully the (in his estimate) pernicious doctrines of his opponent, and to defeat them from the exposed practical flank, and to leave the strongly entrenched spiritual centre alone, he can only do so by providing an organization even better developed. He has very strong reserves at his disposal. He desires war no more than does the pacifist. He desires it no more than he pines for toothache. Nevertheless, he has to put up with toothache occasionally.

And before he organises his forces, he must face facts. The modern generation is educated to a higher degree than, or at least let us say on different lines to, any previous generation. The age of stereotyped repetition and constipating cram is gone. Always has there been a tendency for time present to revolt from time past, but never to such a marked degree as to-day. It is, perhaps, unhealthily exaggerated, but there it is, and must be accepted. After all, the history of the past is not so encouraging as to warrant confidence being placed in the simple enthusiasms of a mere "laudator temporis acti." The youth of the day is familiar with and interested in problems which seldom came within the purview of the youth of 30 or 40 years ago. It is not a question as to whether this is a healthy sign or not; it is a matter of the fact that it is a fact. The high level of the speeches in school and 'Varsity Unions would surprise some of us in our Indian backwaters. And, further, the depth and the width of their reading in which a surprising proportion of the working classes indulge is matter to be reckoned with. They are simply not to be taken in by clap-trap and fustian. But they are apt to be taken in by idealisms cleverly presented to them.

Living, as it does, in a world where the most marked characteristics are a sense of instability and insecurity, a failure of all preconceived laws of economics, a loss of faith in all old shibboleths and abracadabras, a distortion of old values, and a birth of new perspectives, the modern generation seeks to be convinced. It will take nothing for granted, and it can quite justifiably say that age and experience have not saved the world from disaster. Consequently, to convince a modern audience, the orator must summon to his aid cold reason

and prim logic, as well as statements of fact, fully documented. Appeals to mere sentiment will only arouse jeers. The Hitler type would never go down with an audience in England. A generation which has seen the Irish divorce, the impeachment of Free Trade, the heresy of shipping subsidies, the summons for the judicial separation of India, the explosion of the Almighty American Dollar, the disintegration of Kingdoms, the resurrection of the benevolent Tyrant, the phenomenon of Labour Governments in England, the disconcerting activities of Herren Epstein and Einstein, the substitution of pretentious flats for honest houses, the destruction of Devonshire House, the decay of the Manor, police strikes, general strikes, and the universal use of the demi-mondaine lip-stick—such a generation is not going to accept comfortable old doctrines without proof of their justification. The modern orator must speak up to, not down to, his audience.

If this generation is accepting pacifism as a reasoned principle, it does so because it thinks it has good reason to do so. No doctor attempts to cure a disease without an initial diagnosis. If the militarist regards pacifism as a disease which must be stamped out for the good of humanity, a thorough diagnosis is first required to enable the correct remedies to be applied. The reason for pacifism and its continual expansion must be sought for. It has always existed, but only in sporadic form. Now it appears to be endemic and universal. The pacifist will point to the War as the most obvious reason for his existence, and will cite the universal misery it brought in its train, and the extreme difficulty in discovering any obvious or lasting benefit that it has conveyed to any part of the world. But previous wars, though they brought to the surface individual cases of pacifism, never produced this universal crop.

The reason is so obvious that perhaps it is insulting to the mentality of the patient readers of this article to set it down. But it is so important that, at the risk of trite platitudinarianism, it must be formulated. For if the pacifist's logic is based on false premisses in the eyes of the militarist, it is up to the latter to prove that this reason is based on unreasonableness.

(If any pacifist should be seduced into reading this article, at this stage in the argument he might just pause, and consider this point. The middle-aged militarist has, perhaps, seen all he held dear disappear into nothingness since 1914. His friends, his relations,

his old convictions, his old landmarks, his old traditions, his old quiet, comfortable serenity, all swept into the limbo of dead time. The Great War did this. Yet the militarist refuses to excommunicate war. There must be a reason. The pacifist might investigate.)

Modern pacifism was born of tribulation. In the War the civilian in England had brought home to him the unpleasant fact that, in modern war on the grand scale, it is not only the small (presumably militaristic) regular army that has to receive the kicks of impartial fortune, but the whole nation, civil, old, young, male, female. For the first time in English history the civilian was forced to defend himself, not behind a sure shield, but in the beastly reality of the trenches. Hitherto he had been content to let his mercenaries (a peculiar odium seems to attach to this word) do their own dirty work and run their own dirty risks. But now he had to get down to it and assist. In olden days, so little was the country at large affected by the strictly professional wars of the time, that, from contemporary writings, you would never gather that Marlborough had changed the course of world events at Blenheim, that Trafalgar had checkmated Napoleon's plans for good and all. You may read novels and diaries of those days, and only on the rarest occasions will you discover the slightest hint that England had been engaged on a life-and-death struggle. But after the War we were almost swept away by a spate of War literature. After the wars of other days, the streets were filled with maimed beggars—the "heroes" of the press and public platform—to whom a grateful country had no time to pay attention. After the War, a tremendous effort was made to deal with its human wreckage. It is one thing to welcome hysterically the Guards on their return from the Crimea. It would have been quite another thing to share their unspeakable privations.

It is only natural that the civilian, having drunk for the first time of the bitter cup of war, desires to ensure, at any cost, that he and his shall be spared its foulness for ever and ever. Further, being a humanitarian, he sees no reason why the populations of other countries should be exposed to its futilities. War must be outcast throughout the civilised world. "If only it could be," sighs the militarist. Until it can be, "I'd rather keep my powder dry."

Pacifism is universal, but probably it is at its most unreasoned strongest in America, and at its healthiest in England. Obviously it was here that the shock of discovering red horror on the door-step

was the greatest. All nations felt a shock out of all proportion to their previous experiences; still, they had had previous experiences, and therefore the shock to them was not so great as to an insular nation, hitherto happily free from such experience, which had resolutely refused to allow herself to be tainted with what may be broadly termed a Continental mentality. The resultant reaction to pacifism would be naturally stronger in England than elsewhere.

The militarist is, then, up against a frame of mind, a trend of thought, which is only to be expected, and for which very justifiable reasons exist. It is as well this elementary point should be well digested. Even in a war of argument it is well to be aware of your opponent's strength, while to start off by under-rating the logic of his cause is to handicap yourself, not him. It is also as well to remember that the professional soldier is no longer regarded with such kindly tolerance as in pre-war days. It is only necessary to recall the crop of War books—diaries—memoirs—poetry—novels—of the very great, of the not-so-great, of the merely self-important, of the complete nobody, of the natural liar—to realize that the professional soldier has lost more than he has gained as a result of the War, in the eyes of the public. The knock he took during the fiascos of the Boer War were as child's play in comparison. Both the military and the civil Higher Commands have been the target for abuse and contempt, and sometimes the bull's-eye has been hit. It is therefore useless for the militarist to rely on his position as an expert. It is no use his saying, "I know," because the pacifist merely replies—"I don't believe you."

The pacifist is sincerely convinced that the War was the main cause of the existing troubles of the world, and that all its sacrifice and pain have been in vain. Not even the most die-hard militarist will want to deny that the War was an extremely unpleasant, unsatisfactory, disillusioning experience. Even the fact that it did bring out some of the noblest qualities inherent in man cannot disguise the unpleasant truth that it also brought out some of his vilest qualities, and that it inflicted unmerited misery on harmless people.

But that the War was directly responsible for the widespread misery, instability, and insecurity, that have followed in its train is open to dispute. There will be found some who will maintain that the war of words which followed the war of arms is responsible for most of the subsequent mischief, that a peace resting on better foundations would have justified the War. It is, of course easy to be wise

after the event, but it does appear to us now that the peace-makers with a pertinacity not to be denied, promptly proceeded, doubtless with the best of intentions, to establish a state of affairs remarkably like an open invitation to future wars. The problems of reparations and punishments were once prominent, but singularly little is heard of them now ; there was only one solution to them, and that was more war. But perhaps the oddest and most inconsistent of all their efforts was to establish with one hand a League for the purpose of bringing all nations closer together, and so eliminating one of the potential causes of war—a narrow and selfish national spirit, while with the other hand they proceeded to pull to pieces existing political entities and to split them up into smaller entities based on artificial foundations, thereby increasing just those very national and racial barriers which the League was (presumably) intended to reduce. By increasing national, racial, economic, religious and political barriers just so many additional potential causes of war were added to the cauldron over the fire. It is as if some idiot tried to make a jigsaw puzzle easier by cutting up its pieces into smaller pieces.

It is, therefore, not irrational to deny that the miserable feeling engendered by a haunting sense of injustice and insecurity is not directly due to the war. It may be said, rather, to be due to the unstable elements left behind by the peace. The War provided the opportunity, but the peace made a hash of things.

Neither is it quite fair to assume that, had there been no War, there would have been no misery due to political anomaly, injustice and tyranny. The racial, political and other antagonisms that the peace has exacerbated existed to some degree or other before the War. It is as well to remember that before 1914 there was oppression and repression, injustice and exploitation, on the part of majorities over minorities, and of dominant minorities over resentful majorities. There was racial and political unrest before the War. There is political and racial unrest after the peace—a peace, which, for all its protracted labour-pains, was delivered in too great a hurry, and with far too much attention paid to academic theory, and with far too little attention paid to facts of history and geography, and with practically no attention at all to human nature. They did their best ; they feverishly looked at maps and read up history, but what was to be expected, when the greatest Panjandrum of the lot was unaware that Corsica is a Department of France !

There was a restless stirring and muttering before the War. It is fairly safe to assume that the pot would have boiled over in any case had not Serbia, Austria, Germany, and Russia, upset it prematurely. What the peace appears to have done is to have thrown kerosene oil on the red embers left by the War, and start the pot boiling all over again. But it is hardly fair to blame the War for that.

Again, apart from the bad psychological atmosphere arising from an injudicious mixture of political chemicals, there is a positively asphyxiating atmosphere that inhibits both thought and action, which arises from the existing economic, industrial and financial confusion. Here, once more, it is easy for the pacifist to point to the War as the direct cause of the intolerable condition of the world.

It would be more honest to recognize that it was the growing economic confusion of the world which was mainly responsible for the War. An economic crisis was bound to have arisen sooner or later. Practically all nations were living above their income. Once again, what the War did was to pick up the pot before it had boiled over and upset it. To change the metaphor completely, it collected and compressed all the elements of an explosive mixture and touched off the detonator.

But the explosion was bound to come. It would, beyond the peradventure of a doubt, have come had there been no armies or navies in the world. Economic war is irresistible, and, in the absence of armed strength, the War potential of each country would have been the measure of its militant strength. Armed strength would have been extemporised, and that country would have been victor whose War potential was the greatest. Just as the hordes of Genghis Khan were forced to wander from their homes in the regions of the Altai Mountains, and emerge in a flood of world destruction, because they had carelessly exhausted their pastures with no thought for the morrow, just so the pre-war world would have burst into war sooner or later because it was really at the end of its economic tether. Had the explosion been delayed for a few more years, doubtless its intensity would have been still more deplorable.

War is no remedy for disease. Rather is it the climax of disease. It is the result, not the cause, of disease. And all attempts to prevent the climax of a disease without diagnosing and treating the disease itself are as futile as were the efforts of Mrs. Partington and her mop.

The militarist may, indeed, be justified in seeing a close relationship between Mrs. Partington and the pacifist. But that is no reason why the latter should consider him a bloodthirsty Yahoo.

There is one phenomenon which has come to light since the War, which might have remained undiscovered for a term of years but for the War, and that is the realisation that the economic foundations of the world were thoroughly insecure. Consequently all the component parts of the world are now engaged in digging up those foundations, and bitterly disputing with each other as to the best designs and the best materials to be employed for laying new ones. For the most part the tendency is to reverse all previous policy and principle, and to think backwards, as it were. But there is no concerted effort. Each nation is religiously engaged in working away at its own job, and all attempts to make one job of it have hitherto been grievous failures. Consequently, once more, in spite of the League of Nations and the Economic Conference and the Ottawa Conference, the world is deliberately preparing another injudicious mixture of explosive political chemicals which is bound to go up with a bang some fine day. It is the same old mixture, with the ingredients in different proportions. And all the time the old hypocrite gives pious lip-service to the most correct and irreproachable idealisms. As they build their tariff walls, so do they deplore the insanity of tariffs. It is wonderful. The heart of the world may be international, but its mind is determinedly national.

The matters outlined in the paragraphs above are obviously potential causes of war. The militarist will say they are the only potential causes of war. But the pacifist maintains that it is armaments which will cause war, and always have caused war. Eliminate armaments, he claims, and all those other troubles will be found capable of rectification without having recourse to war. To the militarist this looks suspiciously like putting the cart before the horse. First eliminate these troubles (if you can), is his text, and armaments will then perhaps be rendered superfluous as between civilised nations. And he is extremely sceptical regarding the possibility of the immediate elimination of the troubles of the world, because all attempts to do so have failed so egregiously. That it should be possible to eliminate them, he cannot deny. But, before it becomes possible, there must be such a social and moral regeneration of the world that, when the happy day does dawn, we shall indeed be justified in claiming a new

heaven and a new earth. He thinks that our efforts should be concentrated on getting the truism knocked into the heads of statesmen, that you cannot destroy economically a part of the world without destroying the economic equipoise of the world, and that destruction is the herald of war.

In the meantime, he thinks, I had better keep my powder dry.

The answer to the first half of the second question would, then, appear to be something like this. The best way to meet the arguments of the pacifist is by reasoned argument and by co-operation. Let there be discussion, but not dispute. Let there be research as to whether war is the cause of disease, or its effect, the climax of disease. Let the causes of war be analysed rather than its results. And let the sane pacifist and the sane militarist repudiate their fanatics, and get down together to the business which they both have really at heart, the peace of the world.

As for the second half of the second question—who should do the good work. Anyone can do it, who will take the trouble to fit himself for the job. It means research into the history of war; it means accumulation and sifting of evidence; it means development of powers of judgment and clarity of thought; it means training in the art of argument, and skill in exposition; and it means discarding all prejudice, and a readiness to see the other fellow's point of view; it means death to fanaticism and the birth of sanity.

Anyone can do this—who wants to. But there is one class of citizen who should be peculiarly fitted for the job if he wants to fit himself for it. In the *Manual of Military Law, 1929, Part I, Chapter 12, paragraph 1*, will be found the following dictum:—

“A man who joins the Army—whether as an officer or a private does not cease to be a citizen. His official character is superimposed upon his civil character and does not obliterate it.”

That is, the soldier still retains the privileges of citizenship. It is only reasonable that, by implication, he is not divested of the duties and responsibilities of citizenship. This dual capacity of the soldier is, perhaps, sometimes overlooked by him, and it is only charitable to suppose that his military duties do not leave him with much opportunity or inclination to develop that half of him which is civilian.

But unless he does do something to keep alive his civic responsibilities, he is surely not so good a soldier as he should be. Although

restricted as to public appearance or utterance in matters political, he is free to give vent to his opinions in private, and doubtless if he has a family, he is that family's revered oracle. If he has any opinions on the subject at all, he will at times be called upon to expound them. If his opinions are to be treated with respect, and so carry weight, he should be able to prove that they are information, conviction and logic. If he is of opinion that the pacifist principle, however worthy, is a danger to the State, he should be able to substantiate his opinion, not by bluster and contempt, but by reasoned argument. He will then be acting as a good citizen.

And how much greater his opportunities when he has discarded the encumbrance of his coat of mail, and is vegetating in the back-water of retirement. How many middle-aged gentlemen do we not meet, shivering on the brink of the age-limit, and wondering how the devil they are going to fill in the remaining years. The only firm resolution which most of them seem to make is not to separate themselves too distantly from a golf-links. And how many do you meet at home, drifting aimlessly, trying to fill up time.

But surely it is just in these grey days of retirement when it should be possible for the ancient warrior to invest himself with the full dignity of citizenship. Now has come the time when he can give to the service of his countrymen the results of his ripe experience. He has gathered a great deal more than mere professional knowledge during his career. He must have acquired some convictions. He must know something that people deprived of his opportunities do not know. Is it not rather his privileged duty to hand on the torch of his knowledge, and so add his mite to the right-thinking of his countrymen?

As it is, the retired Colonel is generally the target for the impudent scorn of the bright young intelligentsia and the Labour tub-thumper, and it is partly his own fault. For he has never armed himself against such attacks, deeming himself superior to the degenerate generation. Perhaps he is, but it would be still more satisfactory if he could prove they were talking rot. Prove it, and not be content with a mere petulant statement.

CHINA'S CASE.

(AN EXPOSITION OF THE CHINESE VIEW POINT.)

BY CAPTAIN A. E. SWANN, I.A.S.C.

Major Mullaly's interesting article* published in a recent issue of the Journal assuredly does much to illuminate the obscurity of the Far Eastern situation, and provides valuable food for thought. Its conclusion that by vigorous action in Manchuria, the Japanese have dealt a severe blow to Soviet hopes in the Far East, the writer has no desire to challenge. But he would like to avoid a misunderstanding which might result from blind acceptance of this conclusion. Whatever may be the results of the Japanese action, the blow was struck at China and not at Russia ; its motives were nationalist and imperialistic, prompted not by an altruistic desire to free Manchuria of the incubus of Bolshevism, but by impulses perhaps less disingenuous. An examination into the causes and history of the present situation leaves little room for doubt that Japan aimed at nothing less than complete annexation of Manchuria, thus gaining for herself complete control of the vast resources she deems vital to her own existence as a leading industrial nation.

In inviting us to consider the recent Japanese aggression as a well timed blow to the new Soviet "Imperialism of the Far East" Major Mullaly has adopted one of the favourite arguments of the Japanese propagandist publicity campaign. The argument has been put forward very forcibly in effusions emanating from Tokio, and, in that the subject matter is not very familiar territory for the average reader, has often resulted in producing the impression that there is much to be said for the Japanese view point ; that their action, at first sight sanguinary and unprincipled, becomes upon deeper scrutiny not only necessary but magnanimous. The scrutiny however must go still deeper. Upon closer examination the question arises whether Communist Russia is really such a serious threat to world peace and the very fabric of modern civilization, as a League-flouting, treaty breaking, militaristic Japan. Some will find the Russian bogey less terrible from contemplation of the alternative !

The writer sees in the Japanese action and the inability or unwillingness of the Powers to stop it, a serious menace to world peace.

* "Manchuria," published in the April 1932 number of the Journal of the U. S. I. of India.

Japan now has a direct frontier with Russia, her enemy and competitor. China in her isolation and helplessness, deprived of material aid from the League and the Powers—on which she may be excused for having counted, in view of all the peace talk which we have heard in recent years—will naturally be forced to consider the merits of an arrangement with Russia. Russia, in similar isolation, might see in the situation a means of wreaking vengeance on her old enemy, and gaining at the same time a valuable ally with unlimited resources, and a population of 400 million people. China is arming, growing slowly, yet, it is thought, steadily stronger and more unified. Her people have all the potentialities for ultimate success. All that is required is unification and able leadership: the violent hatred of the Japanese is doing much to assist the cause of unification, and in a surprisingly short space of time China may emerge a unified and powerful nation. Chang Kai Shek, assisted by his advising staff of some fifty odd German officers, has already laid the foundation of his new Nationalist army, basing the organization and armament of these new divisions on the Czechoslovakian pattern, and aiming at acquiring an enormous body of fire from automatic weapons. The training of the embryonic Chinese Navy has been placed in the hands of a British Naval Mission. Funds and a certain amount of time are all that are needed to equip China with defence forces capable of driving the aggressor from her territory. There is still much wealth in the country despite the depredations of prolonged civil wars, and under the stimulus of the common desire for vengeance against Japan, it is now becoming possible to float Government loans in China. Memories are long in China; wrongs are not quickly forgotten. Give her time, and unless Japan sees the foolishness of her headstrong policy, China will make a determined bid to force her to relinquish what she has unlawfully taken. It may take fifty years. But with Russia as an ally the conflagration might burst very much earlier than that. The more one thinks of it, the less does one feel inclined to welcome the Japanese action as a timely blow for civilization, in the cause of international peace and amity. Rather has it created a situation pregnant with danger of war—war too on such a colossal scale that it is difficult to visualize what might be the end of it.

For reasons which may be known to those who decide what is best for the public to read, most of the press comments and articles dealing with the situation in Manchuria have been tinged with a

Japanese flavour, or so worded as not to injure the susceptibilities of our powerful war-time ally. This may not be entirely intentional, and indeed it is certain that Japan has far greater skill than China in the dissemination of propaganda, and that she has flooded the world with vast quantities of rhetoric, seeking to justify her actions, and to represent herself as the bulwark of civilization opposed to the imminent advance of Communism. The Chinese view has hardly been heard of. China is not yet powerful enough to *insist* on a hearing as Japan can. But the foreign press in Tientsin and Shanghai has no illusions about the Japanese and has repeatedly published articles criticising Japan's action in the strongest terms. American papers too, sternly disapprove.

It is because there seems to be so much misunderstanding of the real facts of the case, and so little appreciation of the Chinese view point, that it is proposed to attempt to dispose of the arguments usually put forward as excuses or justification for the Japanese action.

The apologists for Japan assert—

- (a) that Japan's action was timely, saving Manchuria from Russian aggression and communism ;
- (b) that Japan's treaty rights in Manchuria were being constantly threatened by the Chinese Government, and were in jeopardy, likely to be abrogated at any moment ;
- (c) that the resources of Manchuria are vital to the manufacturing trade of Japan, and that being grossly overcrowded she *must* find new territory in which to expand ;
- (d) that Japan has a right to the country by virtue of having turned Russia out of it in the Russo-Japanese war ;
- (e) that China has for years been unreliable and truculent, and needed a lesson ;
- (f) that the state of chaos in China was so acute that Japan was forced to intervene in Manchuria in defence of her own vital interests.

As regards (a) it has already been pointed out that the remedy may possibly prove more unpleasant than the disease itself. It should, moreover, be noted that there has been no recent serious Soviet menace in Manchuria, or in fact anywhere in North China. The Soviet authorities fully realize that any encroachment in Manchuria would involve them in immediate hostilities with Japan, and

would be unlikely to seek trouble of this kind at this critical period of their great experiment.

Previous to the Japanese action in Manchuria the Nationalist Government had exerted constant and increasing pressure on the Red Army operating in Central China and had thus prevented any alarming increase in the amount of territory under Communistic influence ; and just immediately prior to the *coup* in Manchuria Chiang Kai Shek had made a more vigorous effort than ever before to dislodge the Reds, and had succeeded in capturing several of their Northernmost outposts. But for the catastrophic floods of that year—which affected a vastly greater area and caused a much higher death roll than the Yokohama earthquake, and yet passed almost unnoticed by the world at large because they had happened in backward China rather than in progressive Japan—this last drive of Chiang's might even have been successful. Then, as if the floods were not enough, a revolt started in Canton, and an army was sent North against Chiang Kai Shek and his Nationalist Government, striking first towards Changsha. One of the leaders of this revolt (Eugene Chen) had just returned from a secret mission to Japan, with the alleged object of securing Japanese support. It is affirmed that the Japanese refused to have any dealings with him, but the fact remains that immediately on his return from Japan the Cantonese attack on Changsha was launched, and forced Chiang Kai Shek to withdraw troops from his anti-Communist campaign to meet the threat from this new direction. Within three weeks, before the attack on Changsha had developed, Japan delivered her knock-out blow in Manchuria. She had chosen her moment extremely well. The Nationalist Government, having coped successfully with the Yen-Feng rebellion in North China in 1930-31, and enrolled the co-operation of the whole of Northern China and Manchuria, had achieved a greater measure of unity than ever before in the history of the Chinese revolution. The future looked hopeful, and Chiang had set about the task of eliminating the Communists in Kiangsi, directed the campaign himself, and made some initial progress. Then came the floods to disorganize everything, and remove all hope of revenue for many months to come from any of the stricken provinces. Following on this came the new revolt in Canton, and close upon the heels of that, the most staggering blow of all when Japan seized Mukden and rapidly overran the whole of Manchuria.

At the time of the Japanese action the Communist menace in Central China was not so serious as it is to-day. The movement was being held in check, some progress, albeit slow, was being made against it, and there was room for hope that in time the Nationalist forces would prevail. Consequent upon the Japanese action, however, Government pressure on the Communists has of necessity been considerably relaxed, and the area under control of the Red Army has grown, until to-day it comprises nearly the whole of Kiangsi province, as well as portions of Hunan and Hupei, and is making inroads into Fukien. Should the Communists break through to the sea and secure a port such as Canton, Swatow, Amoy, or Foochow, their position as regards supplies direct from Vladivostock would be greatly facilitated, and their eventual defeat by the Nationalist Government would be rendered even more unlikely than it seems at present.

It will be obvious to the reader that if the Japanese concern was to rid China of the threat of Communism, her efforts should have been directed towards the hub of the movement in Kiangsi. By co-operating with China in this area she could have achieved the complete eradication of the Communist army and organization; but by her attack in Manchuria, more than 1,000 miles away to the North, she has considerably weakened China's resistance to Communism, and has greatly increased the danger of her eventually joining the fold of Soviet Republics.

It is often advanced that the Chinese are too conservative a people to take kindly to Marxian principles. But it must not be forgotten that the Chinese who inhabit the threatened area are for the most part miserably poor, and often hungry. Hungry people are willing listeners to a gospel which offers them a share in the belongings of others more fortunate. The leaders are discouraged and disillusioned; the youth of the nation is embittered; the army has suffered defeat; the whole articulated thought of the nation is bitterly anti-Japanese. What more favourable conditions than these can be imagined? Japan has only rendered the Soviet menace in China more acute.

It may be true that in the fullness of time Russia might have turned her attention to Manchuria; but Japan could have guarded her interests there by concluding a defensive alliance with China. Simply for the purpose of protecting Manchuria from possible Russian aggression in the somewhat distant future, it was not necessary to

go to the extreme length of annexing the country. Japan could have obtained the maximum amount of security necessary to protect her vital interests from Russian interference without war. She chose her line of action because it was precisely what she had always intended to accomplish, and the time seemed ripe for the adoption of her cherished plan.

The fact that there was no imminent Russian menace in Manchuria or Northern China has already been mentioned. The Soviet Government in 1923 made a determined effort to rope the Chinese Nationalists into the fold of Bolshevism, but, after what seemed an auspicious beginning, the attempt failed miserably, and in 1927 Borodin and his associates returned to Russia disgruntled and disillusioned. Since then Russian efforts in China have been mainly confined to subversive propaganda, and have made little headway in the North. South of the Yangtse however, in the Southern parts of Kiangsi Province, a force which calls itself the "Socialist Red Army of China" holds sway in this mountainous region, and has defied for several years the attempts of the Nationalist armies to dislodge it. Here, virtually in the heart of China, is a small independent "Soviet republic" defying Nanking, and emulating Moscow. By guerilla tactics combined with a judicious use of funds—with which it has apparently been fairly adequately supplied—this army has contrived to hold off the series of attacks which Chiang Kai Shek, the head of the Nanking armies, has launched at it and has consolidated its position in this area to such an extent that its extermination by Nationalist troops has for some time appeared to be an almost hopeless task.

As regards (b) we will concede the point that Japan's treaty rights in Manchuria, in common with all the extra-territorial and other privileges enjoyed by foreigners within Chinese territory, were being threatened and were to some extent in jeopardy. Most of these treaty rights were extorted from an unwilling and defenceless China under pressure, and are a thorn in the side of the Nationalists, considered by them to be an infringement of the sovereign rights of their country. One can hardly blame China for attempting by every legitimate means within her power to get these treaties revised. If matters reached a point where Japan considered she had a case against China for breach of Treaty, she should have submitted her case to the League of Nations, precisely as the British Government have done

more recently in the Persian oilfield dispute. To take matters into her own hands and to invade the country, without even deigning first to appeal to the League, is a breach of solemn obligations, and indefensible. Moreover it creates a dangerous precedent, and is a retrograde step dashing what small hopes there were for permanent world peace. Indeed Japan's precedent in leaving the League has already been followed by Germany.

The argument put forward in (c) is only partially a true bill. It is undoubtedly correct that the raw materials of Manchuria are vital to the industrial life of Japan. It is true too that Japan is becoming densely over-populated and is feeling the need for expansion. But it is wrong to say that she *must* expand; indeed she cannot do so and keep her solemn pledges of non-aggression, unless she either discovers some new territory, or comes to an agreement to purchase territory. The most important items which Japan procures from Manchuria are coal and iron, and a small quantity of oil extracted from shale. The coal mines at Fushun near Mukden produce about eight million tons of coal annually, they are situated in an area conceded to Japan under Treaty in the zone of the South Manchurian Railway, operated and controlled solely by Japan; the oil shale is also in this area. The same remarks apply to the iron mines at Anshan, though the output is far inferior to that of coal. There are also other minerals, rich forests, valuable fisheries and the Soya Bean is extensively cultivated. But with Manchuria under a Chinese administration Japan can obtain all that she requires without difficulty, and no difficulties of any magnitude have arisen up to date. Should they arise in future she should have recourse to the League. But with Japan the buyer of raw materials and China the biggest customer for the manufactured products amicable trade agreements should be possible without League arbitration.

Japan is overcrowded certainly. But so is China. Several of her most crowded provinces are far more densely populated than the Japanese islands. For many years past Manchuria has been steadily absorbing millions of Chinese from the famine stricken areas of central China, at the rate of about a million a year, until to-day out of her population of some 30 millions about 29 millions are Chinese. Obviously China has prior claim to settle her surplus population there, and Japan has no right to wrest the territory from her for the benefit

of her own people. Nor does she really wish to use Manchuria as a vast outlet for her surplus population ; she knows perfectly well that climatically the proposition is not feasible, and moreover that the standard of living in Manchuria is unsuitable to wholesale Japanese immigration. If she desires to acquire agricultural colonies she must apply elsewhere. She may even have to resort to birth control, but she may not, in these enlightened days, seize the property of a weaker neighbour.

To dispose of the argument advanced in (d) that Japan has a right to the country by virtue of having taken it from Russia and handed it back to China necessitates some delving into history. Manchuria has been closely associated with China since the tenth century, when the Khitans, who inhabited Manchuria founded the Liao dynasty and ruled over an empire comprising portions of Manchuria, Eastern Mongolia and Northern China. The Muchens, also inhabitants of Manchuria, overthrew them later, and in 1115 founded the Chin dynasty. A century later they were driven out by the Mongols under Jenghiz Khan ; but their descendants, the Manchus returned to power on the fall of the Ming dynasty in China, and since that date (1655) the Manchu Emperors (the Ch'ing dynasty) have ruled over the whole of the Chinese Empire and its dependencies until the revolution of 1911. With the overthrow of the Ch'ing dynasty the territories and dependencies of China were all naturally absorbed into the new republic of China. The original Manchu population of Manchuria has been almost completely obliterated by Chinese immigration, so that now Manchuria has become virtually a part of China, populated almost exclusively by Chinese ; indistinguishable from China on the other side of the Great Wall. Historically China's claim to Manchuria admits of no argument. It is her property.

Boundary disputes with Russia appear to have commenced in the seventeenth century, when the Treaty of Nertchinsk defined the limits of Siberia and Manchuria (1689). Later, in treaties of 1858 and 1860, readjustments of the frontier were again conceded, in each case Russia having contrived to push her boundary line slightly forward. After the Sino-Japanese struggle for Korea, at the Treaty of Shimonoseki in 1895, China was forced to cede the Kwangtung peninsula in the south of the Manchurian province of Fengtien (now called Liaoning) to Japan. In the interval between the signing and the ratification of this Treaty, Russia, with an eye to the acquisition of an

ice free port in Eastern Asia, invited the Powers to intervene to save Manchuria for China. Britain held aloof, but Russia, France, and Germany made joint representations to Japan, recommending her not to attempt to occupy permanently the territory ceded in Southern Manchuria. Japan yielded to this coalition, retroceded the territory, and extracted from China a fine of 30 million taels in lieu. In return for her services in this matter, China granted Russia the right to build the Chinese Eastern Railway through Manchuria to Vladivostock. China is also alleged to have concluded a secret treaty with Russia permitting her to occupy Port Arthur under certain contingencies. After the German fleet had seized Kiaochao in 1897, the Russian fleet was sent to winter at Port Arthur. In the following year (March 1898) an agreement was concluded whereby Port Arthur, Dairen and adjoining territory—all of which had been retroceded by Japan—were leased to Russia for 25 years.

During the Boxer outbreak in 1900 the Governors of the Manchurian provinces declared war on Russia, in obedience to an Imperial decree, and delivered attacks across the Amur. These led to savage reprisals, Manchuria was overrun by Russian armies, and a military occupation ensued. Final peace negotiations were delayed by negotiations with all the Powers, resultant on the Boxer outbreak. Finally in 1902 an agreement was signed in Peking providing for the gradual withdrawal of all Russian troops during a period of 18 months. These favourable terms were secured for China by the intervention of Britain, the United States and Japan. But Russia was not satisfied with them. She carried out the first stage of her withdrawal and retired from Southern Manchuria; but she declined to complete the withdrawal until China complied with a new set of demands, which amounted virtually to her being granted privileges in Manchuria to the exclusion of all other foreign interests. Britain, the United States and Japan again supported China's refusal of these new demands. Russia proved obstinate, and Japan, as the power chiefly interested, attempted to negotiate. She offered to recognize the special position of Russia in Manchuria if Russia would recognize that of Japan in Korea, and providing that Russia would join Japan in recognizing the territorial integrity of China and Korea, maintaining the "open door" in both countries. Russia was adamant, and the result was the Russo-Japanese war.

Under the peace terms (Treaty of Portsmouth, 1905) Russian and Japanese troops were to be simultaneously evacuated from Manchuria, and Japan took over the Russian lease of the territory in Southern Manchuria known as the Kwangtung peninsular; and the portion of the Chinese Eastern Railway south of Changchun (this, with branch lines added, has since become the Japanese South Manchurian Railway). Manchuria, except for the leased territory, was to be restored "*entirely and completely to the exclusive administration of China.*" Moreover Japan and Russia agreed "*reciprocally not to obstruct any general measures common to all nations, which China might take for the development of commerce and industry in Manchuria.*"

The Treaty of Peking of the same year conveyed China's agreement to the terms of the Portsmouth Treaty, and China agreed to open up a number of towns in Manchuria to international residence and trade. Under later agreement with Japan in 1909 the Korean border was defined, and Korean settlers were allowed to settle freely in the frontier areas, but were to be subject to Chinese jurisdiction.

Enough has been said to show that Japan has no claim to Manchuria, that she has clearly stated this in her treaties with Russia and China, and further that she has recognized that Manchuria is exclusively Chinese, and pledged herself not to interfere in any plans the Chinese may have for its development. The Portsmouth Treaty is of course now only a scrap of paper, and the special provisions emphasized above are not unduly stressed by exponents of the justice of the Japanese cause.

As to the unreliability and truculence of China referred to in (e) this impression is given by the earnest desire of the Chinese Government and people to abolish the "unequal Treaties" concluded with most of the foreign powers. These treaties were signed under duress, and to the ardent reformers who form the Nationalist Government they connote an inferiority at which they chafe. The unequal treaties are resented throughout the length and breadth of China, and the slogan "Ta tao pu p'ing teng t'iao yu'h" (Down with the unequal treaties) is one of the most familiar of the many Nationalist slogans plastered to the hoardings and festooned across the streets of every town. Are the Chinese to be blamed for doing their utmost to abolish treaties which they consider one-sided and unfair, and which do provide for special treatment for foreigners such as extra-territorial rights, and the privilege of living in special concession areas set aside

for foreign residence to the exclusion of Chinese, the owners of the soil? Japan saw to it that *her* unequal treaties with foreigners were abolished many years ago; quite recently Turkey and Persia have also abolished the special privileges they formerly granted to foreigners. Why then should China be expected to retain these unpopular treaties? Already Italy, Belgium and Russia have voluntarily surrendered their extra-territorial rights in China, and Germany has been deprived of hers under the conditions of the Treaty of Versailles; but Great Britain, the United States, France and Japan refuse to agree to the abolition of these rights for their nationals. The Nationalist Government has put through Legislation formally cancelling all extra-territoriality (or "extrality," as the Americans conveniently and very sensibly abbreviate this clumsy word) in 1932, and with certain reservations governing the Shanghai settlement the British and United States Governments were expected to concur; but the French and Japanese were opposed to conceding anything. The question of abrogation is still in abeyance, the disturbed conditions consequent on Japanese action having led to a postponement. The main obstacle all along has been the unyielding attitude of Japan. The Chinese realize this and from this feeling of oppression at the hands of Japan a wave of intense hatred has arisen against the Japanese. This has led to "incidents" and a number of riots and disturbances involving Japanese lives and property. In most of these incidents the Japanese have shown themselves quite capable of looking after their own interests, and have seldom failed to wreak a suitable vengeance involving Chinese life and property. As the unwanted exploiters of China and the oppressors of her weakness, the Japanese, are universally unpopular amongst the Chinese, and anti-Japanese feeling is perfectly natural. But the Japanese propagandists seem to have distorted the importance of many of the incidents for which they blame the Chinese, and in citing them they are merely endeavouring to manufacture an excuse for what was inexcusable. One of the favourite incidents is the murder of Captain Nakamura at Taonan; he was no doubt engaged in observation, and his death is hardly a fit excuse for military operations. The Korean farmers' disputes in Manchuria were more serious. The Koreans as the favoured *protégés* of Japan are almost as unpopular as the hated Japanese themselves, and squabbles over irrigation rights are therefore to be expected. The Japanese took complete vengeance at the time, both in Manchuria and against Chinese in Korea.

Legitimate means existed for the settlement of disputes of this sort, and it was not necessary to go to the length of war in order to secure better conditions for the Korean settlers.

Japan may have considered that China needed a lesson, and China may not have been entirely guiltless in connection with some of the incidents cited. But the lesson should have been administered through the League Council, and not by force of arms.

The statement in (f) that the chaos and disorder all over China was so acute as to jeopardize Japan's special interests in Manchuria is one which may find ready acceptance amongst those who have not visited the country or gone beyond the limits of the Treaty ports. But it is not in accordance with the facts.

The writer has been privileged during the last few years to travel freely in the interior of China and Manchuria and to visit eleven of the provinces. He has also resided in Nanking and seen a little of the Nationalist organs of government. His impression has been that the Nationalist movement is a serious attempt to stabilize a sound central Government in China, and that much progress has been made against almost overwhelming odds. The Nanking Government in 1931 had a far better hope of achieving a unified China than seemed possible a few years earlier, and backed by the union with Manchuria and Chiang Kai Shek's new army, the Nationalists seemed at last to be firmly in the saddle. China was gradually settling down, and the danger of the Nanking Government being overthrown by a revolt against it was beginning to seem quite remote. The suppression of communists and bandits, marching hand in hand with improved communications, began to look less and less like a vision.

As regards Manchuria, this Northern territory had contrived under the able leadership of Marshal Chang Tso Lin, followed by his son Chang Hsüeh Liang, to be more or less immune from the state of civil war and disorder which has existed in China proper. In fact for many years Manchuria has been the one bright spot in the whole of China, the one portion which was steadily going ahead. Highway robbery was not unknown, and there was some organized banditry in the sparsely populated region North of the Sungari; but Manchuria has never been - in recent years - subjected to the same amount of it as China proper. The Japanese plea therefore is baseless. Manchuria was flourishing under Chinese control, flourishing far too well to suit

the Japanese book. In actual fact banditry in Manchuria has very considerably increased since the Japanese took over control of the country, and excesses like the capture of Mrs. Pawley and Corkran from the race course at Newchwang would have been unlikely under the former Chinese *regime*.

What really disturbed the Japanese was not so much the fear of Russian aggression, as of Chinese progress. The "Three Eastern Provinces"—to use the Chinese term for Manchuria—formed the only area of any size within the borders of China which had had the advantage of enjoying, over a period of years, a comparatively stable administration. Chang Tso Lin, who originally was an illiterate bandit, fought in the Russo-Japanese war on the Japanese side at the head of his Hung Hu Tzus,* and as a reward for his bravery later received very rapid promotion, quickly rising to the rank of Divisional Commander. In 1911 he became Governor of Fengtien—the chief of the three Eastern Provinces—and was appointed Inspector-General of the Three Provinces in 1918. His rapid rise was almost certainly assisted by Japanese backing. But when he found himself at the head of the administration of a vast territory, he ceased to be the vassal of Japan, and sought, by every possible means to combat the influence of a foreign power in his territory, and to develop its resources for the benefit of his own country.

His independent attitude was a bitter disappointment to the Japanese, who desired always to call the tune in Manchurian affairs. So long as the head of the administration was prepared to follow the dictation of his Japanese masters, the situation of Manchuria as a part of the Chinese Empire was one which could be tolerated, at any rate for the time being. But under a progressive leader, with a strong Nationalist leaning, and a tendency to become more and more openly anti-Japanese as he felt his position strengthening, Japan's favoured position was beginning to be seriously challenged. Chang Tso Lin, virtually a military dictator in Manchuria, devoted all his energies to the development of the resources of his territory, and drew up many ambitious schemes. These included a network of railways, the main object of which would be to neutralize the strategical value of the Japanese owned South Manchurian Railway, and at the same time to deprive this flourishing concern of a considerable portion of its traffic. A modern Arsenal was established at Mukden, with the

* Literally "Red Beards," a local term for bandits.

assistance of foreign advisers, and became the largest and best equipped in China. Various colonization schemes were inaugurated to provide for the absorption of many of the famine stricken millions from Central China ; plans were afoot for the exploitation of the vast timber resources of the territory, and for the further development of coal-mining, and thus to upset the complete monopoly so far enjoyed by the Japanese coal mines at Fushun. There were even hopes of the establishment of a new harbour on the coast of the Gulf of Chihli, which would be linked up with the new system of Chinese-owned Railways, and would eventually challenge the supremacy of the flourishing Japanese-owned port of Dairen.

The realization of Chang Tso Lin's hopes, however, was greatly hindered by lack of capital. Progress was somewhat slow. But such progress as was made was sufficient to convince the Japanese that their interests were not safe in the hands of their erstwhile *protegé*.

On June 3rd, 1928, Chang Tso Lin met his death, killed by the explosion of a bomb, whilst he was travelling on the Japanese South Manchurian Railway. But, if the Japanese hoped that with the removal of Chang Tso Lin they would regain the ascendancy in Manchurian affairs, they were doomed to disappointment. Chang was succeeded by his son, Chang Hsueh Liang, a young man who was generally considered to be far more interested in pleasure seeking and the solace of the opium pipe than in the affairs of state. The Japanese may well have esteemed him a suitably docile head for the puppet administration they desired in Manchuria. As soon as he assumed the reigns of office, however, young Chang—the "Young Marshal" as he was afterwards called—began to display character and qualities very far removed from the popular estimate of him. He threw himself enthusiastically into his father's unfinished schemes, discarded his opium pipe, placed himself in the hands of doctors to be cured of the habit, and, enraged by the murder of his father, became a still greater menace to Japanese hopes than old Chang. He surrounded his house at Mukden with high tension wires, as a precaution against his own assassination by the Japanese, had himself strictly guarded night and day, and applied himself vigorously to the railway projects already commenced.

During the next few years these projects made considerable progress, and new Chinese lines running parallel to the tracks of the

South Manchurian Railway, began to make themselves felt.* The project for a new Chinese port to compete with Dairen took active shape, and the construction of this harbour at Hulutao (on the Gulf of Chihli, and linked up with the new Chinese Railway system) was placed in the hands of a Dutch syndicate, and work actually commenced in 1930—Colonization schemes went ahead, particularly in the Solun area, where a new and valuable tract of country has been opened up by one of the new Chinese railway lines. Here in addition to bringing a large new area under cultivation with colonist farmers from overcrowded areas of Central China, projects were afoot for the development of valuable coal and iron deposits. Young Chang took a keen interest in aviation, and gradually began to acquire a fairly imposing fleet of aeroplanes, and to effect improvements in the training and armament of his army. Already, by 1931, aided by the depreciation of silver, and the resulting cheapness of Chinese Railway freights in comparison with the Gold yen rates on the S.M.R., the opposition of the new Chinese lines was making itself felt. Given a few more years, and the new harbour of Hulutao would commence to sap the trade of Dairen; and the increased output of coal and iron from Chinese mines would begin to encroach upon the monopolies enjoyed by the Japanese mines at Fushun, Penchihu, and Anshan. Japan apparently considered that she had allowed things to go far enough. If she was to retain her valuable concessions in Manchuria she would sooner or later be forced to fight for their retention; why not then seize the country now, whilst the rest of the world was too busy with its economic troubles to attempt to interfere in a Far Eastern dispute?

* *Author's Note.*—When China agreed to the terms of the Treaty of Portsmouth, she pledged herself (Treaty of Peking, Dec. 22nd, 1905) "not to construct any main line in the neighbourhood of and parallel to" the South Manchurian Railway "or any branch line which might be prejudicial to the interest of the above-named railway." This undertaking was contrary to the spirit of the Portsmouth Treaty, which gave China a free hand to develop Manchuria as she might wish. In 1915 Japan secured from China further concessions regarding Manchuria extending the leases of Port Arthur and Dairen and the South Manchurian Railway. Amongst other points China agreed to call first on Japanese capital if she should propose to build railways in Manchuria and Inner Eastern Mongolia through foreign loans. Considerable railway construction in Manchuria was subsequently undertaken by means of Japanese loans, but Japan retained her right to veto construction of which she did not approve, despite the efforts of China to secure cancellation of her pledge. In constructing parallel lines China did commit a breach of treaty; but the treaty concerned dated back to 1905, and hampered Chinese plans for the development of Manchuria. China, faced with Japanese opposition to her schemes, would have been more correct to appeal to the League rather than take the law into her own hands and build, but she chose the latter course. Japan should then have had recourse to the League, but preferred to use force.

On the night of the 18th of September 1931, a small body of Japanese railway guards, stationed in the zone of the South Manchurian Railway in accordance with treaty rights, was fired on—it is alleged—by Chinese troops near Mukden and a few yards of track were torn up. Within a few hours of this occurrence Japanese troops had seized all the strategic points in South Manchuria, had overpowered the garrison and occupied Mukden, taking possession of the arsenal, aerodrome and a considerable quantity of military stores. Extensive military operations immediately followed the initial *coup*, and eventually the Japanese occupied not only the whole of Manchuria from the Siberian frontier to the Great Wall, but also the neighbouring province of Jehol, and a slice of territory south of the Wall. From the outset the Chinese have denied that any of their troops ever tore up the track or opened fire on the Japanese railway guards; but even if they could be clearly proved to have done so, the reprisals which swiftly followed were out of all proportion to the incident alleged to have provoked them. The swiftness with which the Japanese seized all strategic points and occupied Mukden points to a carefully laid and pre-arranged plan. It is often forgotten that the League of Nations made an honest effort to sort out the rights and wrongs of the Manchurian controversy, and that an International Commission, under Lord Lytton's chairmanship, went into the whole subject very thoroughly and impartially. The verdict—which was unanimous—was damning to Japan.

There are even some people who still believe that in setting up the "independent" state of Manchukuo, under the nominal rulership of Pu Yi, heir to the Dragon Throne of China, Japan has liberated a subject people from the Chinese yoke. They have never even heard the Chinese version, which is this:—

Pu Yi lived in retirement in one of the foreign concessions in Tientsin. During the operations in Manchuria he was kidnapped from his home in Tientsin by the Japanese, taken by steamer to Dairen very much against his own inclination—for he is said to be of a studious and retiring disposition—and thence taken by the Japanese railway to Changchun, where he was thrust upon the throne of the newly created Japanese puppet state of Manchukuo, surrounded by Japanese officials, a completely impotent figure-head. That is what the Chinese believe, and most of the foreigners who were in Tientsin or Mukden at the time appear to consider that it is the true story.

"Manchukuo" did not desire to be liberated from Chinese rule; it was Chinese and desired to remain so. The new administration has been forced upon a population mainly Chinese, to whom any form of Government other than their own is acutely repugnant. The hatred of the Japanese is a very real thing in China, and one cannot travel through the country and mingle with the people without sensing it, and being impressed with its intensity. The population have no illusions about the new Government of Manchukuo; they know that the country has been virtually annexed by Japan, and they remember that a similar farce was performed in the case of Korea before it emerged as a part of Japan.

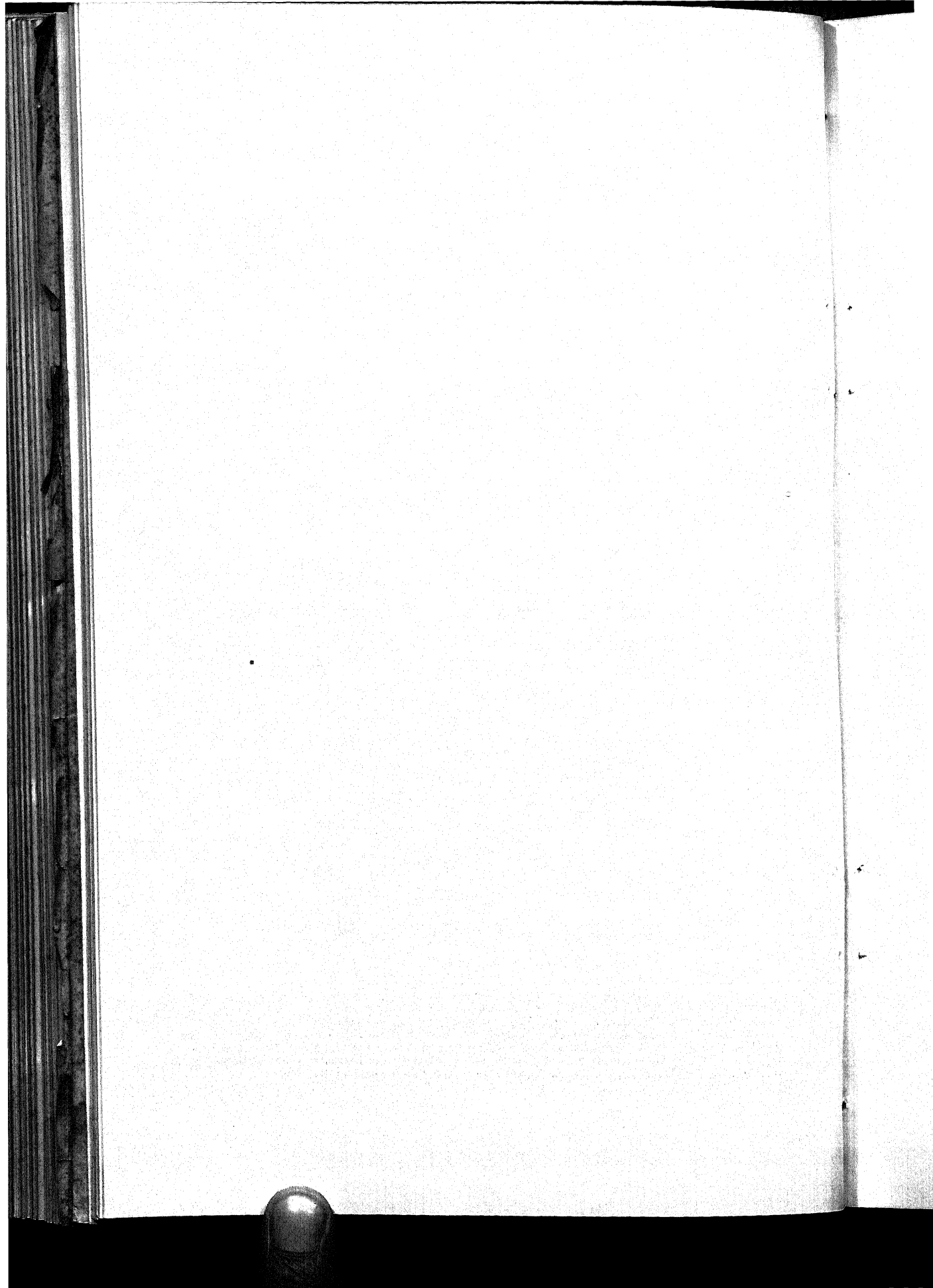
It may well be that, in course of time, if the Japanese administration in Manchukuo is benevolent, the anti-Japanese sentiment will die down completely, and be succeeded by a feeling of complacency that conditions in Manchukuo are happier than in China proper. And Japan too may see the wisdom of co-operating with China rather than fighting her. Unless Japan can achieve this the situation created by her action in Manchuria will constitute an ever present menace to the peace of the Far East.

Not only has she delivered a serious blow to the League of Nations and the efforts and hopes for world peace; but she has produced a situation which must lead to war on a grand scale unless she can find a way out in the meantime; further she has laid herself open to the serious charge of unscrupulous Treaty breaking.

It is hoped that enough has been said to leave no doubt in the reader's mind that the reason for the Japanese action in Manchuria was not primarily the urgent desire to keep Bolshevism at arm's length, but rather that Japan wanted Manchuria, had always wanted it, and felt strong enough to take it, even in face of hostile world opinion. The main points of the usual Japanese arguments have been briefly examined one by one, in an endeavour to show that China has herself furnished Japan with insufficient justification for her high-handed action.

What Major Mullaly hails as "a well-timed blow at the new Soviet Imperialism in Eastern Asia" appears rather to be a determined bid for the eventual mastery of the East, and a prelude perhaps to still more extravagant claims. That ancient bogey "The Yellow Peril" has merely been slumbering; when he awakes to full

consciousness of his power, he may still yearn for those fair Pacific lands, which up to date have successfully resisted Japanese immigration. The rising tide of Bolshevism may be a disturbing thought; but a rationalized Communism or Socialism will assuredly seem to many to be less alarming than economic domination by a Japan omnipotent in the East.



INFANTRY TRAINING.

BY MAJOR H. C. WESTMORLAND, D.S.O., THE HAMPSHIRE REGT.

"Units and lower formations will concentrate on light infantry and light cavalry tactics on the battlefield."

(General Staff "Directive" issued by Army Headquarter on 31st March 1933.)

The tactical mobility demanded by the above quoted Training "Directive" issued by Army Headquarters demands considerable thought and, in the opinion of the writer, a revision of our present methods of training. In India training tends towards dullness for a variety of reasons, of which two may be quoted. A specific war is always in mind and the lack of the most modern equipment is not really felt. New equipment encourages thought and causes experiments with new methods of training so as to employ what we are given to the best advantage.

Secondly, should not the past be studied in the light of the probabilities of the future? Is our training too rigidly based on the lessons of past expeditions? Do we complacently allow it that tactically the future is assured? The element of surprise must permeate everything if leadership and battlecraft are to improve. Light Infantry tactics call for an abolition of academic methods.

I

It is no over-statement to suggest that mentality can be quickened by an improvement in the quality and interest of the schemes devised for unit and brigade training. Such schemes must give commanders as free a hand as possible and must, above all, be simple. Over-directed schemes kill initiative and troops are apt to lose interest in academic situations created by so many exercises. To get the best results from training all ranks must be inspired by the will to win.

Instead of lengthy narratives, a series of reports could be circulated prior to the commencement of training describing the development of the political and military situation. Following these, sudden situations might develop necessitating orders by telephone from Brigade Headquarters. Information about the enemy can be built up from various reports from the air and prisoners, giving scope for

intelligence personnel. The situations created by the Trans-Jordan raids during the campaign in Palestine would appear to be suitable models for exercises.

In spite of the number of river crossings carried out in France and Palestine during the Great War 1914—18, such exercises in India are few and far between. In the future rivers will be increasingly used as obstacles, and infantry must be trained not only to handle bridging expedients, but to perform the work efficiently at night without noise and confusion. The operation, moreover, is interesting to all ranks and provides the all too rare opportunity for the co-operation of engineers and infantry.

II

The additional fire power afforded by an increase in the number of machine-guns with infantry has reduced mobility, and has not brought about a corresponding development in offensive power. The equipment of infantry needs improving to attain the necessary new mobility. In the face of machine-gun fire infantry is still dependent, to a great extent, on artillery fire to cover the advance. The present complement of artillery with divisions in India (48 guns as against 72 at home) does not favour any sub-allotment of it to units in the attack. This militates against close co-operation between the two arms and tends to slow up infantry movement in face of machine-gun fire. In any case it may be presumed in future that the infantryman is to become a specialist whose sphere of action lies in woods, hills, swamps, and the crossing of river obstacles, *i.e.*, in country not suitable for armoured fighting vehicles. Close country renders still more difficult the co-operation of infantry and artillery. A series of ridges, with gorges between each ridge obstructing a view in the direction of the attack, was the difficulty in the second attack on Amman on March 28th, 1918, during the first Trans-Jordan raid. Similar situations occurred prior to the capture of Jerusalem the year before. Supporting fire must be provided by the infantry themselves, and a light mortar would seem suited to Indian conditions.

The present machine-gun is too heavy for light infantry tactics. It cannot be used with the most forward infantry and is not suitable for employment after a movement by mechanical transport. With a view to more offensive tactics the number of machine-guns might

be reduced, especially if an increase in Light Tank units is in contemplation. It might be considered unsound to reduce the potential reserve of men trained to machine-gun work, and to lessen the power of resistance in defence. In that case the problem might be met by equipping a portion of the infantry to provide for the fire power in defence and to give supporting fire in attack, while a portion would be equipped for offensive purposes and light infantry tactics; in other words, there would be both "heavy" infantry and "light" infantry in each brigade. This organization would be obviously unsound for mountain warfare, for indeed only the most mobile units are of use here, and there would always be the danger of not having the right type of unit at hand when it was wanted.

III

The question of training must now be considered and the writer proposes to examine it from the point of view of the British Battalion stationed in India.

Under present conditions of recruiting and organization the standard of battle craft demanded by Brigadier Wavell (*Journal of the R. U. S. I.*, May, 1933), the combined athlete, sharpshooter and stalker, is barely attainable by the average infantryman, in spite of modern education. The drain of good men required for the Headquarters Wing, in both fighting and administrative groups, together with the demands made for hospital orderlies, clerks, garrison police and other such extra-regimental employments, leave rifle companies with men of comparatively low average intellect. Furthermore, personnel of the machine-gun company must be men of superior physique and skill.

The training of the British soldier to-day may fairly be stated as follows:—

At Home :—1 year, during which he may be required for regimental duties or employment.

In India :—2 years with M. G. Company.

2 years as rifleman and grenadier.

2 years as Lewis gunner.

1 year employed on extra-regimental duties.

The detail of a training year for a man in a rifle company is set out in the Appendix.

The result of this examination is to show that a man receives a preponderance of training in weapons at the expense of training in battle craft. This is because the regulations lay down that there must be an annual turnover in machine and Lewis gunners.

The infantryman has therefore to master three weapons (a few the revolver as well) in addition to receiving instruction in grenades and gas defence.

The difficulty therefore is to give the man a chance of qualifying for proficiency pay by a thorough instruction in weapons and at the same time to teach him his battle craft. Owing to the arrival of large drafts this training in the field must continue throughout the greater part of the year. The time required to train men in machine and Lewis gun naturally varies with individual aptitude, but two years is the average time required in the opinion of the writer. A man is therefore always passing on to learn a new weapon as soon as he is proficient in his old one. The solution would therefore appear to be specialization. A decrease in the reserve of machine and Lewis gunners would be offset by an increase in the numbers of potential instructors going to the Army Reserve; in any case these men, having gone away with a thorough knowledge of their weapons, would soon take their place with the colours again even though they had been away for seven years.

The problem of the training of the new infantryman required would probably be best dealt with, in the beginning, by the creation of a large training cadre composed of the most experienced officers and N.C.O's. To ensure continuity of training these would be struck off regimental duties. The battalion would be organized for Individual Training and training of leaders into M.G. Company, Rifle Wing, and Specialists (to include Lewis gunners). Each company would go through the Light Infantry Course under the Rifle Wing Commander, which would ensure a common doctrine at the start.

In order to save time the Rifle Wing Commander might be made responsible for putting all riflemen through the Annual Range Course. The use of a 16 target range by single companies, as at present, is not economical unless sixteen good instructors for firing points can be found in a company, and this is seldom. By utilising a large cadre the whole range could be used, and all riflemen would complete their Annual Range Course before the hot weather.

IV

To summarise, the new tactics will mean more time on the ground. This time will be available if less time is devoted to Weapon Training, which is generally possible only by specializing. To carry out the spirit of the A. H. Q. Memorandum, schemes must be made more original and more interesting. A higher standard is required of men and leaders as the tactics involve even more decentralization than at present. Mobility can be improved by better equipment.

APPENDIX.

The Training Year of the average man in a Rifle Company is approximately as follows:—

<i>Duties, Guards, etc.</i>	.. 3 months.
<i>Non-Training Days</i> (the majority of Thursdays and Sundays).	3 months.
<i>Individual Training</i>	.. 3 months.
In the hills when field training cannot be done. Includes rifle or L. G. training, gas, grenades, education, drill).	
<i>Preliminary W. T. and Annual Range Course.</i>	3 weeks to 1 month varying according to whether in hot or cold weather.
<i>Section and Platoon Training</i>	.. $\frac{1}{2}$ month.
<i>Collective Training</i>	.. $1\frac{1}{2}$ months.

"A MERRY CHRISTMAS IN MADRAS".

BY "CAVALIER."

The principle has been generally accepted that in order to get a true and fair perspective, possibly also to avoid hurting people's feelings, the critical history of a campaign is not normally published until some years after its close, when the chief actors who may be criticised have disappeared from the stage. Although this incident, which is described below, cannot be said to have amounted to a campaign, detachments of certain of our best known regiments of the line were involved as well as the Sister Service, in the shape of the Royal Indian Marine.

In this particular case, it is hoped that the chief actors, as well as the chorus, are still going strong and that, if this catches the eye of any of them, they will agree that the passing of twenty-two years permits of the telling of the tale.

During the winter of 1911, the writer, one—Captain "G", then at the Staff College, Quetta, decided to spend the two months break between his two years there in visiting a pal in his regiment; the latter was then commanding a battalion of Military Police at Taunggyi, in the Southern Shan States. (This decision was taken despite the glories and attractions of the Delhi Durbar, which Authority, ever on the look out for economy, invited Staff College students to attend as motor cyclist despatch riders!).

It was obviously very important to visit this distant corner of the Empire as cheaply as possible. The Staff College Adjutant discovered that the good ship "Chelmsford" was due to sail from Bombay for Madras, thence to Rangoon, in late December with British infantry drafts for the battalions at those places.

These drafts were due to arrive shortly in Bombay by trooper and were then to be transferred to the "Chelmsford." An indulgence passage from Bombay to Rangoon would probably be obtainable and after a hectic exchange of telegrams with the Embarkation Commandant, Bombay, this was secured.

In a light-hearted frame of mind "G" made tracks for Bombay and, after a cheerful lunch party at the Yacht Club, chartered a bundersboat and set sail for the "Chelmsford" which lay at anchor in har-

hour and was due to leave Bombay that evening for Madras. On arriving at the ships' side he was loudly cheered by rows of very pink and youthful looking soldiers who were lining the rails and who otherwise seemed to be employed chiefly in throwing their very new "topis" into the sea and fishing them out again with long bits of string to which various kinds of hooks had been attached.

Flattered by his reception, but wondering why the troops were allowed by their N. C. Os. or officers (none of whom were visible) to indulge in this form of sport, "G" came on board and looked round for somebody to report to. It was sad to observe the difference in the martial bearing of the members of the Sister Service and the somewhat indifferent turn-out of the troops.

On the bridge, the Officer of the Watch, immaculate, sword at side and telescope under arm, gazed with disfavour at his passengers below. Things did not seem right and, pondering deeply, "G" eventually found his way to the office of the O. C., Troops. Here he discovered one—Major "H", of the Limerick Fusiliers, who afterwards disclosed himself as a most friendly and cheerful person, but who was at the time definitely disgruntled, perspiring freely, and very cross.

He was dealing with masses of complicated looking returns and apparently getting little assistance from a very fat and pompous looking elderly Sergeant-Major and two very youthful and new looking sergeants.

"Hullo!" cried "H," "Who the devil is this? Can't you see I'm busy, what do you want? You seem to be some kind of an officer; what are those things on your shoulders?"

"G" was then a fairly youthful captain in Indian Cavalry and rather pleased with his shoulder-chains which "H" had apparently not seen before.

Followed explanations.

"H" beamed—"Good Lord!" said he, "You've come straight from heaven; you're just the chap I want. You're adjutant of this ship, my lad, from this moment and I hope you'll like it. Listen! We arrived in Bombay the day before yesterday morning in the "Blankshire" with drafts for various parts of India.

"More than half of these have been landed in Bombay and every other blessed officer who left Southampton with me has gone with

them. "I remain in sole charge of the drafts for Madras and Rangoon. I've no officers and practically no N. C. Os. Those I have are youngsters and, so far as I can see, were made N. C. Os. just before they sailed. My drafts are 80 Rutland Light Infantry for Madras, 170 of the Wessex for Rangoon, and 150 of my own chaps, the Limerick Fusiliers, also for Rangoon. There are various other details and masses of women and children—I can't think who they all belong to; they're not ours!

"Well, anyway, we were all shipped off the "Blankshire" and into the "Chelmsford" yesterday morning at cock-crow and here we have been ever since and everybody is bored stiff.

"The trouble is that the troops were told by the late officer commanding that as the Madras and Rangoon drafts would be in Bombay harbour two to three days, they would be allowed a run ashore each day to see the sights, properly chaperoned of course. The men were given a good dollop of pay and were very pleased at the idea of actually seeing for themselves the tigers and snakes and all the other marvellous things which they know abound in Bombay. The first thing we heard was that there is plague in Bombay and so, no sightseeing! So their money is burning holes in their pockets and they can't spend it.

"They cheered up a bit when I told them that I'd see the Rangoon drafts had permission to land at Madras later on. I'm rather worried about one thing. The Rutland draft keep to themselves and don't matter, but my lads and the Wessex are far from friendly. Sooner or later there'll be a real row and I haven't got any influential N. C. Os. to sit on their heads. Well, we won't look for trouble, but I'll chuck these returns and take you along to see the Captain.

"He's rather worried too, and will be very glad to hear of the arrival of an Adjutant. The "No. 1," "S," is a topper and you'll like him awfully. Apply to him when you strike any snags."

II

At 6 p.m., the "Chelmsford" left Bombay Harbour and the Adjutant stowed away his kit and settled in.

The "Chelmsford," about 6,000 tons, was an old fashioned ship with the saloon in the stern, and with officers' cabins, also astern, built outside and around the saloon.

She was comfortable enough in fair weather, but a holy terror when the seas arose as they did between Colombo and Madras. There is no cure for sea sickness "however" like work and the Adjutant had few spare moments to himself until the evening.

The long between-deck inspections carried out each morning by the Captain with remorseless attention to detail, with the ship rolling and pitching all ways at once, were very hard to bear. The troop decks were narrow and cramped, but comfortable compared to the women's and children's quarters. Here the Adjutant encountered (to him as a bachelor) most gruesome sights and all his fortitude was called into play to prevent him bolting incontinently to the open air on deck.

The troops (most of their "topis" had apparently been recovered) had cheered up and were behaving well. P. T. kept them busy in the mornings and "H", No. 1, and the Adjutant, laid themselves out to keep them busy with exercise and sports until they bedded down at night like a lot of tired puppies.

Musicians and songsters were sought for because Christmas Day was to be spent in Madras Harbour and a grand concert was to be got up for Christmas evening, which was expected to be a howling success.

"H" was married and his wife was on board with him, also a girl (name, alas, forgotten) who was going to Rangoon with them.

Mrs. "H" and Miss "———" were both perfectly charming. There were also two Nursing Sisters on board bound for Rangoon.

The Captain, the terror of his young officers on duty, was cordial enough in mess. No. 1 was a really cheery sailorman of the best type and all the more junior officers were pleasant fellows. Life on the whole went very well. On the morning of 24th December, the "Chelmsford" being due to arrive alongside the trooping jetty at Madras early on Christmas morning, "H", No. 1, and the Adjutant discussed the programme for Christmas Day.

"Church Parade, of course, in the morning" said No. 1, "but I take it, Major, you'll get the Rangoon drafts off in the afternoon for a walk round when the Rutlands have left us. That will give me a clear ship to dress the quarter-deck for the concert and put up all the extra lights, bunting, and pretty things for Christmas evening."

"H" agreed; "You can take the troops for their walk "G" he said to the Adjutant—"For goodness sake look after them and don't

let them stray. They have a fair amount of pocket-money but No. 1 says that most of that will go to the merchants on the jetty who swarm like flies directly a ship arrives, especially a troopship. I hope these damned young N. C. Os. will be of assistance. They are a bit better now.

"Keep the Wessex and the Limericks in two separate parties. If they get a chance to scrap on shore, they'll take some stopping."

The "Chelmsford" reached Madras in the early hours of Christmas morning. The weather was definitely unpleasant, a biggish sea outside and drizzling rain. We were told later on that when the weather was really bad at Madras, ships sometimes (in those days) had to leave harbour and cruise about outside.

Whether this is still the case is not known, but, even though such an event would have been most unpleasant, we should have been spared a lot of bother if we had spent Christmas Day at sea.

By 7 a.m. we were tied alongside and the business began of getting the Rutland draft and all their kit, also details, women and children, for Madras off the ship.

Staff officers and all kinds of people crowded on board and the Major and the Adjutant were immediately immersed in returns of every description. Suddenly the senior staff officer, a Lieut-Colonel who hitherto had seemed to be quite a pleasant sort of person, said—"By George: I'm most frightfully sorry but, by an oversight, we didn't send you a signal yesterday to say we've got plague here and no troops can leave the ship except Madras details. It's bad luck as you won't get away till to-morrow morning—rotten way of spending Christmas Day—what?"

"H" gasped, but with an effort he kept control of his features—"Do you really mean to say we can't take them off for a bit of real exercise? They've been on board a ship for over a month now and are simply bursting out of their skins. They've been promised a run ashore."

"Awfully sorry" said the Colonel, "but orders are orders and there it is. I'm afraid there is no more to be said."

"Well," said "H," "you better tell the Sergeant-Major, 'G,' and the sooner the troops know, the better. Get on with it!"

The troops soon knew, and, after breakfast, large numbers of gloomy young soldiers lined the rails on both decks and gazed dismally

on to the jetty and at the palm trees and buildings of Madras, so near and yet so far! How to get through another darned dull day?

The only thing that brightened life at all was that about ten o'clock every kind of peddler and merchant appeared on the jetty to sell all kinds of rubbish, parrots, and even small gorgeously coloured fish in glass jars, to the soldiers. All kinds of local fruit and strange looking buns were pulled up by the men in baskets attached to long strings, even the fish in their jars full of water making precarious journeys up and down the ship's side.

One thing No. 1 had warned the Adjutant about was that these same merchants always tried to sell drink to the men whenever a troopship came in. This drink consisted of various brands of whisky and gin, and sometimes the most awful kind of local "fire-water" guaranteed to lay out in no time the young British soldier new out to the East.

The Adjutant, therefore, had posted sentries along the quay at intervals and near the gangways and no Indians were allowed on board, so all seemed to be well.

Christmas Day dinners were cheerful enough and the Captain had presented each of the men's messes with a noble cake of colossal proportions, baked on board.

The usual ceremonies took place and the Captain, No. 1, the Major, and the Adjutant, went to their own lunch at 1-45 considerably refreshed.

Followed a lull in the proceedings and at 3 p.m. a fatigue party of about 50 Rutlands under two young N. C. Os. returned to the ship to take off the last remaining kits and baggage for the shore. It was drizzling but not really a wetting rain and the Adjutant wondered why the men were all wearing their greatcoats. It certainly wasn't cold!

It wasn't very important, however, and he thought no more about it. By this time, the business of returns and so forth was finished and the shore staff had left the ship. Feeling rather sleepy, the Adjutant decided he'd walk it off and so started off on the usual round. On arriving on the portside upper deck, the side away from the jetty, he was much intrigued, on looking over the rail, to see that an exceedingly brisk trade was being carried on between unpleasant looking natives in small boats, and the troops who had their heads out of the scuttles in two rows all along the ship's side.

There were quite a lot of boats and the men seemed to be taking in baskets of what appeared to be fruit and paying very high prices for the same.

The Adjutant felt a complete fool ! He was quite pleased with his precautions on the jetty side and, being chiefly busy that side, had not given a thought to possible transactions on the sea-ward side. It might be fruit that the men were taking in, but supposing it was drink.

No N. C. O. had, evidently, considered this worth reporting. After all, they were just as new to these strange affairs as the men. The Adjutant hared off to No. 1, who was busy with his own affairs, and pitched his tale.

"Of course it's probably drink you cuckoo," cried No. 1, "why didn't you tell me before ? Anyhow, I'll get these boats away and keep them away."

In no time, No. 1 appeared on deck with a fatigue of lascars and grimy looking stokers equipped with large baskets of coal. These were deployed along the rail at suitable intervals and the boats were bombarded with huge chunks of coal. One or two boats were actually sunk and the remainder of the boatmen, thoroughly defeated by No. 1's appalling fluency in the language and final long range volleys of coal, paddled off, gibbering hideously, and retired hurt. A mobile defence, in the shape of a ship's boat manned by lascars, with further supplies of coal patrolled the harbour side of the ship and that incident was closed.

N. C. Os. were detailed to search the men's kits and mess decks for bottles of drink, but nothing much was found. Some bottles were produced and confiscated, but it did seem to be mostly fruit which they had taken on board including numbers of large melons. "Probably have a lot of tummy aches tomorrow" mused the Adjutant and thought no more about it.

III

So the long day wore on and No. 1 and his company were busy making the quarter-deck beautiful with bunting and lights for the concert which was to start sharp at 9 p.m. Christmas Dinner in mess was a very good and cheerful one with everyone in great form. At 8-45 we all repaired to the quarter-deck which No. 1 and his merry men had made into a dream of beauty.

A stage had been rigged up right astern and facing it were chairs for the ladies and officers. The British members of the ship's company and the troops crowded round in a semi-circle behind the chairs, sat along the rails, and flowed over every portion of the ship from where the concert could be seen and heard.

The Adjutant thought the men seemed very cheerful and rather unusually noisy. The appearance of the Captain and "the quality" was greeted with loud and prolonged cheers.

The first turn was a banjo solo by the Adjutant, in those days rather proficient on this instrument, who, aided by one of the ship's company on the piano, crashed out a series of then popular airs and music hall songs. This was well received by the troops who joined lustily in the choruses, a bar or so behind the principals. So pleased indeed was one soldier that, unhindered, he solemnly walked towards the stage and presented the Adjutant with a foaming glass of beer amid the cheers of his comrades.

This somewhat irregular proceeding, so early in the evening, caused a certain stir in the mind of the recipient of the beer and probably also in the minds of most of us present. The donor of the beer was, however, tactfully shepherded back to the outer ring by the ship's Sergeant-Major. After all, Christmas comes but once a year! and the next item was hastily proceeded with.

This was a comic turn between two back-chat comedians disguised with red noses and strange garments as beloved by the British soldiers.

Somehow this back-chat didn't sound at all like what they had produced at rehearsals and after about two minutes of appalling sentiments and revelations they were hurriedly removed. This did not please the soldiers who deserted in large numbers.

The concert looked like being a "frost" and there was a painful pause. Most of the men seemed to be going below in a certain state of excitement. No. 1 and the Adjutant had a hasty discussion with the Captain and "H."

The two lady passengers and the Nursing Sisters, not yet apprehensive in any way, talked on brightly to the young ship's officers.

Suddenly and unmistakeably came from below decks a low and ominous murmur, like the growling of an angry mob, followed by cries and a loud splash astern. Things were not going according to plan!

The concert was frankly abandoned. The Captain escorted the ladies to the saloon where he calmed their fears. The ships' officers went about their businesses and "H" and the Adjutant flew to the after rail to see who or what had gone overboard. It was by now pitch dark and raining cats and dogs.

Visibility was poor but by the gleam of a light cluster astern and some lamps on the jetty, we were able to make out an apparently naked soldier splashing about under the stern and swimming down the jetty wall away from the ship.

From the dark on the jetty, moving parallel to the swimmer, came strange shouts and exhortations—"Ah! now! Kape shwimming bhoi! Kape on shwimming!" and "Kape yer head up Danny, we're coming to help ye!"

"H" and the Adjutant abandoned the rail and fled to the after gangway and on to the jetty pursued by the gangway sentry.

Catching up the swimmer, "H" lowered the sentry's greatcoat towards the water at the end of one sleeve. The coat was grabbed by the now rather tired soldier who turned out to be a Limerick Fusilier.

Despite fervent exhortations to "Kape shwimming" from his friends on the jetty, who were two stark naked Limerick Fusiliers, we pulled out the adventurer and proceeded back to the gangway preceded by two naked forms who gibbered and danced ahead like demented spirits.

At the gangway stood the two Nursing Sisters ready to render first aid—but the shock was too much for them and they fled.

The ship's company meanwhile had not been idle. The Officer of the Watch, correctly appreciating the situation, gave the order—"Man overboard! away lifeboat's crew," or words to that effect.

A rush of lascars aft and the boat, on davits right astern, was manned and lowered—all shipshape and navy fashion. All seemed to be going well when a truly nautical cursing arose from the officer in the sternsheets and the boat began to sink slowly with all hands.

Had somebody forgotten to put the plug in? Let us draw a veil over the painful scene; meanwhile, the rescue had been effected.

While these stirring events had been taking place outside, what of No. 1 and his adventures? These are best told in his own words, after all was over.

"As soon as I heard the row below and the men began to leave the concert, the Sergeant-Major and I thought we had better go and see what it was all about.

"I saw you and 'G' had gone to discover whatever had made the splash, so I didn't wait for you. The fat S.-M. does have a brain wave now and then and he said he thought he had better double the guard on the rifles in case things looked ugly. This he did, but where he found a sufficiently sober number of men I don't know.* However, it was lucky he did this, as a minute or two later there was a nasty rush of infuriated Limericks towards the guard. These were, however, fairly easily stopped and pushed down below.

"What had started the row, or rather had brought things to a head, was that three bold lads from Wessex, having been jeered at by a Limerick, had quietly removed him aft into Wessex territory, had taken off every stitch of his clothing and pushed him through one of the stern portholes.

"That was the splash. This deed was observed by two other Limericks who were prevented from coming to their pal's aid by a superior concentration of Wessex.

"Seeing what was going to happen, these two Limericks broke away, shed all their garments and went off to assist on the jetty!

"The fight was now properly on and nothing could stop it. Some N. C. Os. I knew by sight were well in it!

"Something had to be done pretty quick—just about then you fellows came along and so you know the rest of the story."

What No. 1 had done was this—the one thing he was really worried about was that the combatants would set the ship on fire. He didn't think they would do much other damage except to themselves (which he didn't mind) if they were plunged into darkness.

*In those days the rifles and bayonets were all kept in racks amidships on the upper deck.

He also didn't think they'd pay any attention to any of the ship's company who went below. The two factions were much too busy with each other.

He, therefore, had all the water-tight doors closed and all lights turned out below.

What commenced as a general engagement was, by the resourcefulness of No. 1, converted into a number of minor and disconnected night operations. At the moment when "H" and the Adjutant joined No. 1, this piece of work had been completed.

The row below was terrific still, but muffled. The Adjutant thought of the lines from the "Geebung Polo Club"—

"For they wadded one another till the plain was strewn with
dead

And the game was kept so even that they neither got ahead !

For the pace was so terrific that 'ere half the time was gone

A spectator's leg was broken, just from merely looking on !"

The battle raged, but gradually the sounds of combat got fainter and fainter until they died away altogether.

Eight bells, midnight, and "All's well !"—another happy Christmas Day had gone with its peace and goodwill !

IV

Next morning before 5 a.m., we were well away from Madras and *en route* to Rangoon in dirty weather. At crack of dawn the Captain, accompanied by the full inspection procession visited the battlefields. The first report was that there were no corpses. Obviously this was only because the troops had been so drunk that they could not develop their maximum efficiency as soldiers ! Also it's very hard to hurt a drunken man, as most people know. The scene along the troop decks baffled description.

Every portion of the deck was covered with broken glass, broken bottles, complete and as yet unemptied bottles of every kind of drink, even champagne (so called) ; equipment, broken benches, all the tin enamelled mugs (which appeared to have been the first weapons used), personal equipment, clothing, swimming about in dirty water mixed with alcohol.

The atmosphere was appalling !

In two rows, facing each other, down the decks stood or shivered miserably the most sorry collection of half-clad wrecks that ever graced the British Army!

There was nothing much to be done except carry on and clean up, and a muster parade on deck was ordered for 11 a.m.

What a parade it was!

The troops were, of course, properly dressed and paraded like real soldiers, but never was seen such a collection of black eyes, broken noses, and thick ears, with here and there an arm in a sling. The amazing thing was that nobody was really badly hurt. It was impossible to keep a straight face and even the Captain, terribly grim though he looked, was forced, after gazing at one particularly fine rainbow countenance, to have urgent business on the bridge, where, the Navigator afterwards informed us, he laughed until the tears ran down his face.

Of course the affair was really by no means a laughing matter and after the muster parade was dismissed, the N. C. Os. were paraded apart and certain searching questions asked.

What had happened was that the soldiers had taken on board enormous quantities of drink from the boats before they were driven off. Nearly each melon contained, cleverly hidden inside it, a small bottle of local "fire-water!" Sad to relate, the Rutland fatigue party, well subsidised with cash by the other soldiers, had brought on board under their greatcoats more drink—"For every man a bottle or two!"

Certain ringleaders were discovered, including the men of Wessex who had pushed the Limerick Fusilier through the porthole. "H" had a busy morning and eight unfortunate soldiers, including two former N. C. Os., spent the remainder of the voyage to Rangoon in unpleasant little cells forrard, below the waterline.

As if to tell us that all was now forgiven, the weather changed, the sun came out, and for the remainder of the voyage, some three days, the good ship "Chelmsford" ploughed through a sparkling blue sea. A normal life was resumed and Limerick Fusiliers and Wessex became the best of friends and took each other on, in friendly rivalry, at every form of sport,

Finally, on disembarkation at Rangoon, both drafts cheered each other heartily on parting! Whether any further action was ever taken by Higher Authority in connection with this small war is not known to the Adjutant. He only knows that he had to write no report about it (which is unusual) and he heard no more.

Shortly after the ship was cleared he bade a sad farewell to the Captain, No. 1, "H" and the ladies and all, and caught the first train to Thazi bound for the Southern Shan States and real leave.

WHAT IS MILITARY GENIUS ?

BY MAJOR A. L. PEMBERTON, M. C., R. A.

"A strong mind is one which does not lose its balance even under the most violent excitement." Clausewitz, "On War," Vol. 1, p. 57.

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This paper is the sequel to four others on Cromwell, Stonewall Jackson, Marlborough, and Wellington, contributed in that order.* Its object is to summarize the lessons of the foregoing studies and to explore the nature of military genius.

Cromwell's lesson to posterity was the power of the unconscious mind. From the time of his religious conversion in 1638, his mind was filled with a single thought, the fulfilment of God's will as expounded in the Scriptures. His military victories were but a means to this end, and the exploitation of his talents he left to Him from whom they had been derived. His greatest difficulty lay in the correct interpretation of the divine will. So long as the fighting lasted, there was no room for doubt, but when the Royalists had been finally crushed and dissensions began to break out among the victors, Cromwell found himself in a very awkward predicament. As a prominent member of both Army and Parliament, he was torn by conflicting loyalties and racked by doubts as to which of his two former allies now possessed the approbation of the Lord. From that moment, it is clear, his peace of mind—and with it his unerring genius—began to desert him.

Stonewall Jackson, having started his military career as a young man, inflamed with materialistic rather than spiritual ambitions, made a more conscious adaptation of his natural talents. "You can be what you resolve to be" was one of the maxims that he drew up for himself at West Point, before he had heard the call of religion; and though, after his conversion, he seems to have grown ashamed of his earlier and worldlier ambitions, he retained—to his great advantage as a general—the trick of conscious concentration he had then acquired.

Marlborough, like Jackson, was frankly ambitious as a youth, and, unlike Jackson, he never felt the need subsequently to re-orient his ideals. Loyalty had been the pride and ruin of his family in the Great Rebellion, and loyalty—to wife, family, Church, and Country—was the lodestar of his own career. He never allowed it to blind him

*See *U.S.I. Journal*, India, July '29, Jan. '30, July '31, and Jan. '33.

to reality ; he took men and things as he found them, frankly admitted his own faults, and never made the mistake of regarding himself, or anyone else, as indispensable. Hence he avoided the disturbing influences of megalomania on the one hand and exaggerated self-reproach on the other. In debate as in action, in victory as in defeat, he retained his mental equipoise, and was seldom if ever surprised out of his habitual clarity of thought and urbanity of manner.

Wellington again resembled Cromwell and Jackson in that his mind was not naturally well poised like that of Marlborough ; he had a hard struggle to achieve, and to maintain, his mental equilibrium. But he differed from Cromwell and Jackson in the means that he employed for this purpose. Although by no means an irreligious man, he guided his life according to his own conception of the duty of a public servant and a gentleman, and was content to let the divine will work out its own fulfilment. He was, therefore, able to retire from an untenable political position with the same calm sanity that marked his retirement from a similar position in war, and he finally resigned himself to a political débâcle that infuriated many of his followers and would probably have broken the heart of Cromwell.

Yet he never quite achieved the mental stability of Marlborough. If he avoided the megalomania that brought Napoleon a miserable exile to St. Helena, he could never get away from the amiable illusion that there was "no animal so hard-worked as the Duke of Wellington." His greatness, I have suggested in my last article, became essential to him as compensation for his emotional failures, and he clung grimly to his public offices long after reason should have told him he was no longer equal to the strain.

If, then, we were asked to make a definite comparison between our four heroes, we should probably feel compelled to give the palm to Marlborough by reason solely of his superior mental equilibrium.

Such comparisons are, however, of very little value. All that we are here concerned with is the importance of a well-balanced mind, and in the following pages I shall attempt to discover the various mental forces among and between which this balance has to be maintained.

To begin with, it is, I think, a fair assumption that they must be closely allied to the principles of war as given in our Field Service

Regulations. Here, however, we come up against a difficulty. For with the recent banishment of the maintenance of the objective, the number of these principles has been reduced from eight to seven, and it is not easy to make an odd number conform to the law of conflict. It is, of course, possible to imagine a mathematical arrangement of seven interdependent forces that will produce a condition of equilibrium, but such an arrangement would not be in agreement with our experience of nature. All known natural phenomena can be divided into pairs of opposites—such as black and white, hot and cold, male and female, love and hate—and there seems to be no reason why the principles of war should not act in the same way.

For this reason, I have taken the liberty of reintroducing the maintenance of the objective (under a different name), and I suggest that the resulting eight principles can be arranged in four pairs of opposites, as follows :—

1st Pair—Offensive Action and Co-operation.—The relationship here may at first seem a little far-fetched, but it is based on the following argument. Offensive action has its origin in individual aggressiveness and initiative, co-operation in self-abnegation and the renunciation of individual aims for the sake of the common good. We all know how in practice a plan of attack that is admirable from the purely infantry point of view may have to be discarded because it offers no facilities for artillery support. A balance has always to be struck between the time factor and the need for co-operation in the launching of the attack ; that is, between individual initiative and team work.

2nd Pair—Concentration and Economy of Force.—This pair requires no explanation. One must economize at the less important parts of the battle zone in order to concentrate at the vital point.

3rd Pair—Surprise and Security.—History is rich in examples of the interaction of these two principles : the German use of gas and our own use of tanks in the Great War, to mention only two of the most notable. In both cases, the surprise was more or less complete, but success was impaired by the failure to apply the new methods on a large enough scale, due to the traditional distrust of new methods and the natural desire to play for safety. In the same way, the possibility of a tactical or strategical surprise on the battlefield is always limited by the necessity of arranging for the security of one's

own movements. The advance of the attacking force must be preceded by reconnoitring detachments and the appearance of these detachments will, in the majority of cases, put the enemy on his guard.

4th Pair—Mass and Mobility.—The principle of mass has been introduced to take the place of the discarded maintenance of the objective. It is represented in its simplest form by the solid mass of the Roman legion as opposed to the loose-knit but rapidly moving swarms of the Parthian horsemen. But a similar conflict is to be seen in the controversy that raged during the Great War between the exponents of the Western Front and the so-called Side Show theories.

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Now let us see if we can agree upon four equivalent pairs of mental qualities. Names present something of a difficulty, since we are dealing with abstractions, but the following have been selected after a careful search among the pages of a thesaurus.

1st Pair—Courage (or Self-Assurance) and Humility (or Self-Abasement).—Absolute courage would unquestionably be a harmful thing ; physically it would lead to recklessness, morally to arrogance and heedlessness of others. It must therefore be tempered by humility, and this may be of two kinds : external or objective, and internal or subjective. Both are based on the religious sentiments, the difference being that in the first kind reverence is paid to an external and personal God, while in the second kind the Deity is conceived rather as a spiritual force acting through the human mind or soul, and the individual is more inclined to reason about his religion and to devise ethical standards of his own.

Cromwell's humility was of the external or objective type, and nowhere is it more clearly or beautifully illustrated than in the words of his dying prayer. "Lord, though I am a miserable and wretched creature, I am in Covenant with Thee through grace. And I may, I will, come to Thee, for Thy People. Thou hast made me, though very unworthy, a mean instrument to do them some good, and Thee service . . . Lord, however Thou do dispose of me, continue and go on to do good for them . . ."

This was characteristic of Cromwell's attitude throughout life, and explains his desperate anxiety that the Lord and not himself should receive the credit for his victories. "Surely, Sir," he wrote

to Speaker Lenthall after his overwhelming victory over the Scots at Preston, "this is nothing but the hand of God." Even after Drogheda he could write : "It was set upon some of our hearts, that a great thing should be done, not by power or might, but by the Spirit of God." And so it was in all his despatches. "It is the Lord's doing," "Give all the glory to God" are typical expressions that mark the humility of his attitude towards his own extraordinary powers.

As a leader, therefore, he was unassuming and accessible, tolerant of everything except insubordination and disobedience. He might domineer in the council or on the battlefield, but when off duty he was affable to all and thoroughly enjoyed a joke or a game with his troops. They in return loved him and would make the most strenuous exertions, or undergo the severest hardships, at his bidding.

In battle, though eager and aggressive, he never forgot that there were other parts of the fight besides that in which he was personally engaged. At Marston Moor and again at Naseby, he showed himself a master of the combined action of cavalry and infantry, and though his artillery was normally neither numerous nor mobile, there were occasions—such as the battle of Langport (July 1645), at which he was present as second-in-command to Fairfax—on which it was made to co-operate most effectively with the action of the other two arms.

Wellington's humility, in contrast to Cromwell's, was internal or subjective. His standards of conduct were mostly self-imposed. "I have done" he once wrote "according to the very best of my judgment, all that can be done. I care not either for the enemy in front, or for anything which they may say at home."

Yet, though outwardly insensitive to criticism, he was extremely sensitive to the thought of failure as measured by his own standards. He hated to admit himself in the wrong, and even hated being helped in anything that he believed he could or should have mastered for himself.

Such a character was not likely to yield itself very readily to the genial spirit of co-operation. So great was his control over himself that he could not understand or sympathize with the weaknesses of others. His leadership, therefore, lacked the human touch that had distinguished Cromwell's, and in later life his statesmanship was

hampered by a distrust of the mob, with whose aspirations he could never learn to sympathize.

It is, perhaps, significant that Wellington was not at his best when dealing with the combined action of all arms. As an infantry commander he is without a superior, but he was sometimes unhappy in his relations with his cavalry and artillery, especially the latter.

2nd Pair—Sagacity and Common Sense.—One cannot be learned in everything; even the cleverest brain has its limitations, and the most efficient man is he who concentrates his brain power on essentials and leaves the rest to chance and common sense. This is particularly so in war, where the conditions so often demand immediate action. There is little time amid the heat of battle for the application of profound thought; yet one cannot act blindly; one must have a plan in one's head which, while not descending to details, will ensure consistency of action.

The soldier, then, is not absolved altogether from thinking; but the nature of his task requires that he should concentrate his thoughts on a few important subjects, rather than scatter his mental energy in a number of different directions. He must cultivate the solidity of thought that leads to rapidity of action, rather than the facility of thought that leads, only too often, to hesitancy and indecision.

It is for this reason, perhaps, that the soldier has sometimes acquired an undeserved reputation for stupidity. Yet Stonewall Jackson was a studious and profound, if not very successful, instructor in higher mathematics; and Cromwell, though no lover of books, was capable of much thoughtful study when the occasion demanded. He seems to have valued and acquired some proficiency at mathematics and cosmography, while as Lord Protector he displayed a knowledge of Greek and Latin, and an interest in literature, sufficient to attract the notice of the representatives of foreign powers in London.

The example of Wellington is even more instructive. His first serious attempt to make a study of his profession occurred after he had been refused the hand of Kitty Pakenham in marriage, on the score of his poverty and lack of prospects. Three years later, when about to embark for India, he greatly extended the scope of his labours. Perhaps he already had an inkling of his brother Richard's coming appointment to the governor-generalship; perhaps it was merely his shrewd perception of the fact that in India the soldier

would need to be something of an administrator as well. At all events, before setting sail, he spent no less than £50 on the purchase of books, most of which were historical and dealt with India, but some of which were devoted to the study of politics, law, and economics.

From that moment his capacity for the sustained and methodical study of facts never deserted him. In India, he acted as military adviser to his brother, organized supply trains, governed Seringapatam, and conducted the Mahratta campaign with unremitting industry, energy, and success. And on his return to England in 1805, he wrote appreciations for the Cabinet on various proposed operations in America (where he had never been); examined with perfect gravity an egregious project for an expedition *viâ* Madras, Singapore, the Philippines and Botany Bay, against the Pacific coast of Mexico; gave his views on the Swedish expedition entrusted to Moore in 1808; and, when France and Russia appeared to contemplate a combined attack on India by way of Persia, supplied ministers with the lines of a defensive campaign.

For all his study, it is true, he never acquired any intellectual polish. Even after Waterloo, Count Molé could write: "Wellington's intelligence is, if anything, below the average, and his education even inferior to his intelligence. He can neither talk nor write."

Yet his wit was sharp enough. When, during one of the periodical waves of hostility towards himself that swept through Paris in 1815, the French marshals pointedly turned their backs on him at a King's levee, he said in reply to Louis' apologies. "It does not trouble me in the least, Sire. It is not the first time I have seen their backs." And again when George IV, whom he had conducted on a visit to Waterloo, and who was afterwards inclined to romance to his friends about the battle, turned to him one day and appealed for confirmation on a point of fact, the Duke drily replied: "I have often heard Your Majesty say so."

Hence we may conclude that the successful soldier's frequent lack of erudition may be partly the result of expediency, and not entirely due to stupidity. He may prefer to restrict the number of his thoughts in order that his mind may be kept simple and clear.

3rd Pair—Cunning and Candour.—The word cunning has now acquired a rather unpleasant flavour, but there appears to be no other word that describes so well the faculty we are about to consider. This

faculty, which is not in itself dishonourable, may act by stealth or by deception. In the latter case, its success depends upon a true insight into the character of one's opponent.

Cromwell was a master both of secrecy and stratagem. Consider, for example, the skill with which he kept secret the destination of the ill-fated naval and military expedition under Penn and Venables in 1655. He "was known to be preparing for war but nobody succeeded in learning against whom, and therefore all (European nations) feared him and tried to ingratiate themselves with him at the same time.... Since the Dutch victory, no one had been able to divine his plans. It was known only that the fleet was sailing over the ocean towards the Antilles—an English possession. But in America there were also the vast colonial dominions of France, Spain and Portugal."* Hence Cromwell was able to keep all Europe on tenterhooks and increase the prestige of his own government at a time when things were going none too well for him at home.

As regards strategem, his skill in deception is a never ending source of inspiration to his unfriendly critics. At the end of May 1647, we are told, when the Army and Parliament had fallen out, and everything seemed to turn on the possession of the King's person, Cromwell, while stoutly affirming in the House his loyalty to Parliament, called a secret nocturnal meeting of officers at his house in Drury Lane, and there commissioned Cornet Joyce to snatch His Majesty from the Parliament's keeping. Later, in November 1648, when the patience of the Army was becoming exhausted, Cromwell was conveniently delayed by the siege of Pontefract Castle, and so did not arrive in London until the 7th December, the day after Pride's Purge—soon enough, that is, to take advantage of a *fait accompli*, and late enough to escape the charge of complicity in this revolutionary act of the soldiers. Mr. Belloc even goes so far as to accuse him of the most skilful double-dealing in his treatment of the King at this time. "It is he" he writes "who, by an admirable double management, sees to it that the King has special courtesy and freedom among the officers before Parliament is crushed, and yet manages to maintain a reputation for aloofness. It is he who, *when parliament is crushed*, works with extraordinary skill to make the King fly, and therefore compromise himself."†

*See "Oliver Cromwell," by Eucardio Momigliano, pp. 204-5.

†See "Oliver Cromwell," by Hilaire Belloc, p. 51.

One cannot help feeling that Mr. Belloc has allowed his own ingenuity to run away with him in thus interpreting the facts of history. On the other hand, there is no doubt that Cromwell's cunning—however morally or immorally he may have applied it—was one of the main causes of his success as a soldier.

Marlborough had the same remarkable *flair* for knowing when to make use of secrecy and stratagem. Godolphin knew far more of what was in his mind than the most trusted of his officers, yet even he was often left in the dark owing to the fear that their cipher might be stolen. As late as April 1704, the secret of the projected move into Germany was kept between Marlborough himself, Wratislaw, the Emperor, and Prince Eugene. Not until the end of this month, apparently, was Godolphin let into the full secret. Marlborough then pretended to the Dutch that he was going to operate on the Moselle, and ordered stocks of shoes and supplies to be collected at Mayence, Frankfurt, etc., places that would equally well serve a campaign on the Moselle or a march up the Rhine into Germany. Later, he obtained permission from the Landgrave of Hesse to send artillery *via* Mannheim, and arranged for a bridge of boats at Phillipsburg, which made the French think he was threatening Alsace. Not until the beginning of June, when he turned east and struck up the valley of the Neckar, did it become clear to everyone what his destination was, and it was then too late for the French marshals to concert measures to stop him.

His skill in deception, and the power of sizing up an opponent upon which it was based, were equally remarkable. In his 1702 campaign, he completely dominated the mind of Boufflers. Indeed, he almost seemed to be "doing the Frenchman's thinking for him. If Churchill wanted to have Boufflers make a certain move, he himself moved in such a way as to suggest it; and then, when Boufflers had adopted the suggestion, honestly supposing it to be an original thought, Churchill was ahead of him."*

He was even prepared to use his histrionic talents to deceive his enemies, as when he outwitted Villars in his 1711 campaign and so skilfully penetrated the lines with which that able but boastful marshal had designed to bar his advance into French territory.

In spite of their cunning and secrecy, however, both Cromwell and Marlborough were simple, honest men. Indeed, common sense

*See "Marlborough," by Donald Barr Chidsey, p. 177.

tells us that excessive deception and secrecy must eventually defeat their own ends. More than once an attack has failed because a subordinate commander has been forced to make a critical decision without sufficient knowledge of his superior's plans. The size of the modern battlefield is so large as to render absolute control of the operations by one man impossible, and there is thus an increasing need of latitude in the application of the principle of secrecy.

For different but no less obvious reasons, cunning, to be successful, must be grafted on to a character of sterling honesty. A shifty and dishonest man is suspect from the start, and soon fails to inspire his friends or to deceive his foes.

4th Pair—Pertinacity and Adaptability.—Pertinacity was one of the outstanding characteristics of the Duke of Wellington, yet he could be adaptable enough when the occasion demanded. His political opportunism has already been referred to, and his Peninsular campaigns—especially Salamanca—show the same readiness to remould his most cherished plans to suit the circumstances of the moment. Indeed, his belief in plans was never strong. He once said pityingly of the French Marshals that “they planned their campaigns just as you might make a splendid set of harness. It looks very well, and answers very well, until it gets broken; and then you are done for. Now, I made my campaigns of ropes. If anything went wrong, I tied a knot; and went on.”*

Another form of adaptability is to be seen in Marlborough's relations with the Duke of Wurtemberg at the siege of Cork in 1690, and with Prince Louis of Baden during the march on Donauworth in 1704. Recognizing as clearly as he did the importance of the time factor, he must have been deeply chagrined at the arrival of the Duke of Wurtemberg at Cork three days after the siege had begun, and his insistence upon his right to take over the command. At the same time he realized with equal clearness the futility of a blank refusal, so he temporized, suggesting that each should command on alternate days, and giving “Wurtemberg” as the password on his first day in the leadership. The Duke, soothed by his tactful handling and smooth talk, and observing that he was dealing with a man of real ability, soon ceased to interfere with his designs and willingly adopted his suggestions.

*See “The Duke,” by Phillip Guedalla, p. 272.

In Prince Louis of Baden, Marlborough had a more difficult man to deal with. Though experienced and not altogether lacking in ability as a general, the Prince was obstinate by nature and steeped in the dilatory tactics of his school and times. He was, therefore, a most unsuitable leader to whom to entrust the swift, daring blow that Marlborough had designed and that the state of the Empire's fortunes demanded. Nevertheless, rather than risk an open quarrel at so critical a juncture, Marlborough again contented himself with a compromise. He ostentatiously agreed to share his command with Louis and, when the latter led the army into the village of Amerdigen and handed over the command on the evening of 1st July, resolved to set forth as early as possible the next morning, cover the fifteen miles that still separated them from the Schellenberg, and make good the crossing over the Danube at Donauworth before Marshal D'Arco's detachment there could be reinforced.

These are examples of how tenacity of purpose may profitably be tempered by adaptability. There are, of course, numerous examples to show that excessive pliability may lead to a fatal disregard of the true objective. Here, as elsewhere, success depends upon the discovery of the happy mean.

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Such, then, seem to be the ingredients of military genius, which, for the sake of clearness, may be set forth in a table showing their relationship to the better known principles of war.

<i>Pair.</i>	<i>Principles of War.</i>	<i>Elements of Military Genius.</i>
1st	Offensive Action and Co-operation.	Courage and Humility.
2nd	Concentration and Economy.	Sagacity and Common Sense.
3rd	Surprise and Security.	Cunning and Candour.
4th	Mass and Mobility.	Pertinacity and Adaptability.

Success is in both cases dependent upon the attainment of a proper balance among and between these four pairs of conflicting principles. The really great soldier is not he who crashes his way to victory regardless of others but he who can win the willing co-operation of his fellow-men and mould their diverse impulses into one common will ; the general who tries to concentrate everywhere will be strong nowhere ; surprise without security is more alarming to

friend than foe ; and mass without mobility is doomed, like the mammoth of old, to become the victim of its own monstrosity.

In the same way, a capacity for leadership depends not on reckless courage but on a willingness to face danger for the sake of a cause higher than the mere fulfilment of one's own personal aims ; the commander who is overwise, and tries to work out every problem by the laws of reason and logic, will be struck down in the middle of his cogitations by an opponent who knows how to mix his logic with the swift action of intuition and common sense ; cunning without candour soon arouses the distrust of one's friends, and fails, through sheer monotony, to deceive one's foes ; and finally, pertinacity without adaptability is of no avail—even the bulldog has to learn to shift his grip as opportunity offers.

Everything, in fact, depends on balance ; vice is but exaggerated virtue, a sign that some quality has broken loose from the controlling influence of its mate. A man is overbearing if he has too much courage, abstruse if he has too much wisdom, sly if he has too much cunning, and obstinate if he has too much pertinacity. On the other hand he is pusillanimous if too humble, narrow-minded if too reliant upon common sense, indiscreet if too frank, and vacillating if too adaptable.

Greatness therefore, if measurable at all, ought to be measured in terms of balance. The most successful general may be he who makes the fewest tactical or strategical errors, but the greatest commander is he who has come nearest to achieving perfect mental balance ; for balance means self-control, and self-control is the key to the control of others.

MODERN ATTACK.

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An article on Attack*, which appeared in a recent issue of the *Journal*, raised many interesting points. The tactics of Frederick the Great, the Duke of Wellington, and Napoleon, were examined to show that, in attack, column is superior to line. Few soldiers will disagree with the contention that, by the end of the War 1914—18, depth in attack had replaced line. It does not follow, however, that the change was due to any inherent superiority of column as a formation, or that another change will not occur in the future. A comment of Aylmer's† is perhaps appropriate:—

“There are fashions in the methods of waging war which gain
“an enormous hold over soldiers, and for a time it appears im-
“possible to act otherwise, but, in the end, there arises some
“great leader who does not mind being unfashionable. He wins
“battles in a different manner, the fashion changes, and we cannot
“understand how anyone could have followed the old one.”

We may deduce from the above that the decision as to which school of tactical thought rules depend, first of all, on the genius of the commander. He it is who sees the advantages to be gained by one method, and develops it to achieve his object.

Frederick the Great and the Duke of Wellington had, as the article pointed out, highly trained professional armies. The men could be trusted to stand and fight with little behind them—line tactics were possible. Napoleon, on the other hand, had many raw levies who needed close supervision. Control could be kept by marching them forward in column—in line they might have broken. The second factor which decides between the two schools of thought is therefore the type of army which the nation has.

The third factor is weapons, and, to-day, this means all machines used by an army. As Fortesque tells us, individual marksmanship has been a tradition with the English since the days of Crecy—it has won them many battles. In Wellington's day (as in 1914 when the British relied on rifles) line tactics were necessary for fire production.

*The Evolution of the Modern Attack.—The Fallacy of the Line by Lt.-Col. O. G. Body, D.S.O., R.A., *Journal of the U.S.I. of India*, July, 1933.

†Protection in War, by Major-General F. J. Aylmer, V.C., C.B.

Napoleon had not this tradition to assist him, and his levies probably lacked musketry skill. Being himself a gunner, he, naturally, turned for fire to the weapon he knew best, and we find him massing his artillery fire to cover the advance of his infantry. Wellington and Napoleon, therefore, both selected tactical formations suited to their weapons.

It follows that one tactical method suits one set of conditions and the other a different set. The danger lies in adopting one in its entirety, and maintaining it, even when the signposts point towards the other. Much criticism (most of it unjust) was levelled at British Commanders during the late war. There was, however, probably this much justice. The Commanders had been taught a certain doctrine and had learned it thoroughly, so thoroughly in fact, that they kept to that doctrine, long after a new one was needed. The British race is naturally conservative—it relies on tried and proved methods. The British army doctrine of 1914 was tried and proved, but it had been stored in the cupboard of peace so long that the army had outgrown it. It needed taking out, dusting, airing, and fitting to the times. As a result, we started the war short of machine-guns, artillery and ammunition, and remained so longer than we need have done. Through the same cause the tank met criticism, hostility and obstruction. Our doctrine should not, therefore, be based on history alone. We must fit the lessons of history into the conditions we are likely to meet in the future.

This is all the more important since we now live in an age of progress and change. The great leaders of the past fought few battles in each campaign, and changes in doctrine developed slowly. During the late war, however, the combatants were in close touch for years and fought daily. Each had ample opportunities of studying opponents' methods. Repetition of a tactical manœuvre was often fatal since the enemy was prepared for it. Consequently, a whole crop of doctrines sprang up during that war, and many of them are still thriving and choking the tender plants which calm post-war judgment is trying to raise. Sea, land, and air transport, printing presses, telegraphs, telephones and wireless have stripped privacy from nations. Armies now see into each others training grounds. Soldiers must be alert and ready to change their doctrines without waiting for reverses to force changes on them.

"The Fallacy of the Line" credits modern artillery with great power in attack and implies that it is this power which crushes defence. Infantry fire has, however, always been superior to artillery fire. Wellington's rifle fire defeated the French again and again in spite of massed artillery. Napoleon himself saw this for we find that—"The attacking columns were preceded by skirmishers whose duty it was to provide fire which covered the movement. During the twenty odd years of the Napoleonic wars the number of troops deployed as skirmishers considerably increased."¹

Napoleon found that he must use more and more line tactics and infantry fire to make up for the weakness of an artillery attack.

Infantry fire is still superior to-day. The modern infantryman uses machine-guns (Vickers or Lewis or both) instead of rifles, and he has so many of them that an enormous concentration of artillery is needed to overcome him. Even in France, where, for some artillery attacks, we used one gun per five yards, infantry defensive fire survived, and we turned in despair to the tank. In open warfare, for which we now train, such artillery concentrations will rarely be possible, yet defending machine-guns are more numerous. The War Office Exercise on Fire Plans shows how great a concentration of artillery is considered necessary to-day to overcome even a small amount of infantry fire.

It is therefore the infantry defensive fire which is the powerful weapon—a weapon so powerful that infantry attack is almost dead. Artillery cannot blast a way through the defences to let the attacking infantry walk forward unharmed. By massing all the available artillery on portions of the defence, we hope to lessen defensive infantry fire from those portions, so that our own attacking infantry can fight their way forward with their own weapons—but fight they must.

The gunner, like the machine gunner, being somewhat remote from the immediate battle, often sees a general principle clearer than the infantryman. The latter becomes absorbed in his immediate troubles. Napoleon, a gunner, saw the value of an artillery attack and used it. He knew that, in theory, it should succeed. Surprised at its failure, he blamed a wrong size and density of his infantry columns. It is suggested that the author of "The Fallacy

* "The Fallacy of the Line," page 323. *Journal of the U. S. I. of India*, July, 1933.

of the Line " is following the same chain of reasoning, and is proposing a theoretical artillery attack which, however, is equally doomed to failure.

Machine gunners are prone to the same mistake. How often does a machine gunner work out a very good machine-gun plan to support an infantry attack, only to find that the rifle companies do not share his enthusiasm for it? He shows that every place from which the enemy can bring fire on to the attacking troops has been covered, but still the infantry shake their heads. Bitter experience has taught the Battalion Commander that, no matter how good the artillery and machine-gun attacks are, some enemy automatics will survive, and his men must face them. Consequently, he insists, and rightly so, that he must have some artillery and machine-guns at call to break down this opposition, as it shows itself, and let him continue his advance. Similarly, Company and Platoon Commanders know that each will meet surprise situations, and anxious as they are to push on, they just pause to make their little " Fire Plans " if their attacks are to succeed.

Ground is all important to the infantryman. It is one of the " Unknowns " which make a battlefield different from a chessboard. The defender uses ground to defilade machine-guns, and he keeps these guns silent until they are needed. An attacker's initial artillery and machine-gun fire plan cannot silence all these guns.

Local Counter-Attacks also use ground to protect themselves from the attacker's artillery and machine-guns. These counter-attacks strike the attacking troops as they enter the defences - their weakest moment. The attacker's artillery and machine-guns cannot see to help their own troops. Automatic weapons must therefore be with the forward troops. The proposals to take Lewis guns away from Platoons, and to divorce the machine gunner from the infantryman, no matter how attractive in theory, will find small favour among officers who have commanded Platoons and Companies in war.

The further proposal to insist on Sections advancing in file and not in line will be equally opposed. Sections are taught to use the formation most suited to the ground over which they are moving. Only by being with the Sections can one say whether or not the leader is using the correct formations. His guide is that he collects to use cover, widens his frontage to use weapons, and disperses to keep down

losses when under small arms fire. File is recognised as being vulnerable to aimed small arms fire, and no infantryman would suggest that it should be used to cross open ground while any enemy small arms are unsubdued.

The use of column in attack is not without some advantages to the defending gunner and machine gunner. If one may, with great trepidation, venture an opinion on an Artillery subject, surely the forward burst of a shrapnel shell fits better along a column than across a line? Perhaps the problem of placing four or six shell-bursts along four or six columns is too complicated for a battery commander in the rush of a battle? The method appears, however, to offer him some chances when he can observe his fire.

The writer feels on firmer ground when he discusses machine-guns. A line engaged frontally is the worst machine-gun target. The beaten zone of a machine-gun varies with the range, and is from about one hundred and fifty to five hundred yards long, but only a few yards wide. Most of this beaten zone is wasted on a line target engaged perpendicularly, but when placed along a line from a flank the maximum result is obtained. Consequently, enfilade fire is best and is continually sought. Yet, as the author of "The Fallacy of the Line" points out, flanks, in the tactical sense, belong to only the higher affairs of war, so, except for these minor affairs, the machine gunner cannot get either his flank position or his enfilade target. The best he can hope for is some oblique fire, which, except for its high moral effect, is a sorry substitute.

But what of the column?

If the attacker is going to advance entirely in column, he will give the machine gunner a moment when dreams come true. It is scant labour to the machine gunner to fit *his* beaten zones along the columns, and he would welcome the chance. No longer need he worry himself to find enfilading and oblique fire positions. He can site his guns to shoot straight to their front, and his only fear will be that the enemy may change to extended line before the machine-guns can reap the full harvest.

That bugbear of the machine gunner—Overhead Fire—will also lose many of its terrors. At present, someone always gets in the line of fire of the guns, so safety clearances must be worked out and maintained. If, however, the enemy will attack frontally in column,

the defender can leave machine-gun lanes in his defences, and no clearances (except flank) need be considered in those lanes. Even when overhead fire must be used, it is much simpler when directed straight to the front.

No sane soldier will cavil at his tactical doctrine being based on sound theory, but he will generally ask that the dish be garnished with a little seasoning of practical experience. The infantryman (the writer happens to be a cavalryman) has had much experience of attack, and has found that he must rely, when all else breaks down, on himself. He knows that he will meet the unexpected, that the best of fire plans will still leave him fighting to do, and that he must have skill in the use of ground and weapons, and formations to adapt to them. Only then can he hope for success in attack.

SHADE ON SHENANDOAH.

BY CAPTAIN W. H. GARDINER, 8TH (K. G. O.) LIGHT CAVALRY.

Stonewall Jackson's last fight was typical. The advent of death was faced with the same serene courage which characterised his whole life. No attempt was made to conceal from him the certainty of his end: yet he remained wholly unperturbed. And the fate of his country was uppermost to the last, despite the presence of a dearly loved wife and the young child he had scarcely set eyes on.

His was undoubtedly an outstanding character and personality, even in a country and period which produced many. The implicit faith and regard of his stalwarts is alone sufficient to elevate him above his fellows; for it was won despite an uncouth dress, disdain of the colourful uniforms of the period, wretched horsemanship, a forbidding manner, a shunning of publicity, and the ascription of all success to his Maker.

Their unquestioning love, homage, admiration and devotion, quickly succeeded an initial attitude of sullen resentment due to the unaccustomedly high standard of discipline which he insisted upon. The people of the South were little less tardy in following suite. Even the defeat at Kernstown, bitter blow though it at first appeared, did not arrest the rising wave of Jackson's popularity.

The homes, meeting places and publications of the Confederacy soon echoed with his deeds in song, poem and tale, which sometimes even bordered on the supernatural; and a far-away, outside world, with little interest in the struggle, soon came to focus a great deal of attention on the nineteenth century Pilgrim Father. The friends he fought with, the world which looked on, and even his foes, acknowledged the sterling character who had arisen to fill a forlorn cause with hope, and bring it within measurable distance of triumph.

Posterity also has come under the sway of this personality; for in his biography Jackson had the services of a devoted admirer. Many great leaders have had similar loving posthumous service, but few have been delineated by such an able pen.

Gazing over the beauties of the valley from Swift Run Gap, bidding farewell to his own Stonewall brigade at Centerville, playing with the children of Mr. Corbin at Moss Neck, manually assisting his

transport through the rain sodden tracks leading to Port Republic, standing lone sentry over his exhausted, sleeping army on the march to Romney, and even refusing to cancel a sentence of death for a paltry crime at Winchester, are scenes invoked to stimulate our interest and affection. The earnest professor of mathematics, the loving husband, the stern disciplinarian, the cool leader in battle, the unflinching seeker of victory—even in defeat—the intrepid inspirer of General Lee, and the humble thanksgiver to God, are welded into a picture which would capture admiration from the most hostile heart.

Henderson has succeeded in placing Jackson on a pedestal with the great leaders of the past; but Henderson could have done that with many who have passed into oblivion. Likewise has Fitzgerald served Omar Khayam. So now the popularity of Jackson with students of military history tends rather to wax than to wane. His campaigns are the subject of study for both the promotion and staff college examinations. They are more or less regularly in service journals. The influence of modern weapons on his campaign is frequently discussed. The fact that only the Federals were likely to have such weapons, seeing that they placed an effective blockade on the Southern ports, and alone possessed manufacturing facilities, does not appear to be realised. It would therefore appear as useful to discuss the effect of the chlorination of the Styx on the operations of Hannibal.

The popularity of the Valley campaign with those responsible for directing military study is understandable; for it is quite rightly acknowledged to be one of the most brilliant in history. The magnitude of the strategical results that followed the actions of such a small force are almost without parallel. It is natural to assume that the genius of Jackson was responsible and therefore that Jackson's methods should be studied.

There are many, however, who hold that the childish incompetence of the Federal leaders did more to consummate these results than did any of Jackson's wiles. A writer in the *Army Quarterly** recently took some pains to support this view. He fell, unfortunately, into the common error of overstating his case without any solid foundations. The fall is the more notable since this particular writer criticised this very fault in others.

* *The Army Quarterly*, October 1931.

He even stated : " There is a tendency among students of the history of war towards sweeping verdicts, either of praise or blame. The generals of the past too often appear to be drawn solely from one or other of the two categories. All are either superlative geniuses or congenital idiots——and behind what seems to our eyes the most foolish of operations, there may be usually discovered some plausible and often startlingly sensible motive if we will only investigate the matter diligently enough." Yet, little effort is made to analyse the reasoning which prompted General Jackson's decisions.

A subsequent writer* attempted to re-establish Jackson's prestige by showing that Lincoln, the Federal head of affairs, was a military genius. A closer study of the official records would have clearly revealed the futility of this endeavour. Lincoln displayed the mind of a master in the negotiations which preceded the outbreak of hostilities. The handling of the Fort Sumptner curtain-raiser showed genius; for the Northern people were moved from indifference to intense patriotism in a night. But no touch of the military mind was in evidence. It had not, indeed, been necessary. Almost every incursion of Lincoln into the military conduct of the struggle shows a crudity and lack of knowledge which appear incomprehensible.

However, in spite of all this illuminating controversy Jackson emerges as a general above the ordinary; for there can be no doubt whatever that he exhibited splendid initiative and judgment in taking full advantage of the many openings offered, and furthermore, he revealed a very clear understanding of the mentality of his opponents. While, however, admitting all this, it cannot be ignored that his engagements lacked the finish of a master-hand. Some even contained blunders of magnitude.

At Kernstown he walked into a simple trap. It might well indeed be considered the ordinary disposition of Shields' forces. The numbers reported by Ashley were considerably less than those known to have been in the vicinity; for the cavalry were held up by the weak frontal screen and had made no attempt to get round the wings, although the country offered splendid opportunity for doing so. Jackson should undoubtedly have attempted to verify the information of his mounted arm. Again, instead of attacking from the direction eventually selected, he launched a tentative frontal assault. Finding this unavailing, the main body were flank marched across the enemy's

* *The Army Quarterly*, October 1932.

front. Wellington, at Salamanca, gave Marmont the answer that Jackson laid himself open to Kernstown; but Shields was supine. Had he not previously neglected to secure his right or even place a lookout post on those very hills which were afterwards the key to the battle?

Jackson's direction of the battle cannot, however, dim the brilliance of his achievement in clearly foreseeing the strategical results of the action. Few victories even, can equal the glory of this defeat. The repulse of a few thousand Confederates had thrown the whole Federal machine into a state bordering on panic. Stonewall Jackson and his small band of intrepid warriors had paralysed the movements of many armies.

High amongst Jackson's performances must be placed his masterly retreat from Harpers Ferry. There can be no question that it was a consummate piece of generalship. Yet he again leaves himself open to criticism; primarily, because the advance to this point promised no tangible results commensurate with the risk.

The proximity of many armies to his line of retreat was well-known to Jackson and furthermore, there was ample evidence that the threat to Washington had been already sufficient. Henderson contends that intimate knowledge of the characters of his opponents assured Jackson of escape. Yet the fact remains that he was virtually surrounded eventually and only passed through the encircling cordon owing to the disgraceful timidity of his enemies, on which no sane leader should have dreamt of calculating.

The rashness of immaturity was again displayed at the battle of McDowell. An attack was launched on the Federal forces without any attempt at concentration. These were, therefore, able to withdraw in comparative immunity and much of the value of Jackson's surprise was lost. Had the Northern army displayed the very elements of military knowledge it would not have been encamped in a death trap without even a sentry to warn them of the approach of danger.

Jackson here missed an opportunity of annihilating the whole force. He might himself have suffered a similar fate had the Federal leader sent the normal cavalry patrols to watch the approaches from the Shenandoah valley; for he would have had ample time to arrange the ambush which Jackson's unconcentrated march invited.

An action of this type is hardly calculated to be instructive as a study except in how not to do things. Both leaders, in fact, were models of futility. There was no reason for the Federals to have attacked. An orderly retreat, covered by a rearguard was as feasible at the time as it proved afterwards; and Jackson was surely the essence of slowness in arranging to place a force astride the line of retreat. Henderson's criticism of the action is extremely poor.

Napoleon had no greater admirer than the Valley General, who studied the tactics and strategy of his great predecessor closely. Two Austrian armies, advancing down either side of Lake Garda during the campaign in Italy, were permitted to almost unite before being attacked. Similar tactics were pursued by Jackson when Federal armies advanced against him down both sides of the Massanutton mountains. He had determined to attack them, but delayed doing so until they had almost united at Cross Keys.

It is true that he defeated both forces, but the margin of victory at the battle of Port Republic was of the slenderest. Had Frémont displayed a spark of initiative, Jackson must have been caught between two armies and severely defeated; and he was far more to blame than Napoleon, for Lake Garda was unbridged, but the Massanuttons were crossable at one vital point, the Luray Gap. It offered a strategical opportunity of rare magnitude. Either Federal army could have been attacked without the slightest chance of succour from the other; and with the Confederate flanks and line of retreat covered. Neither Marlborough or Wellington were ever faced with a similar situation, but it is difficult to believe that they would have ignored such an obvious strategical windfall.

It is noteworthy that the battle of Port Republic was the third occasion on which General Jackson attacked before concentrating his forces. Yet Henderson claims him a rival to Napoleon in the art of concentration on the field of battle.

Colonel Henderson unwittingly reveals doubt as to the measure of Jackson's ability; for he appears uneasy that his hero's actions may be the subject of criticism. Some pains are taken to argue that the campaigns of all the great captains, when examined as double dummy problems, reveal strategical and tactical errors of consequence. None will stand meticulous dissection when full knowledge of all the circumstances affecting both sides are available. He more

especially selects Wellington for comparison, and not always to Jackson's disadvantage.

Here Henderson is gravely in error ; for Wellington's brilliance was of the sound order. His great contemporary, on the other hand, was surely a favourite of fortune. Did he not turn three defeats into great victories by the opportune use of his trumpeters ? He had never encountered a leader of capacity or troops of spirit until he met Wellington at Waterloo. The great Italian campaign was fought, firstly, against an alliance of little conviction, and then against a country which, owing to the heterogeneous composition of its forces, has never alone won a war, and which was at the time led by a succession of gallant old dodderers.

Wellington, on the other hand, successfully led an army of three different races against the pick of Napoleon's Marshals ; Marshals who had won fame against the same opposition as their illustrious Emperor. It can easily be inferred what Wellington would have done, had he had their opportunities.

Jackson was a great General. He was the mainstay of the Confederate forces. His death marked the turning point in the struggle of the South for independence. He was outstanding among the many notable personalities which figured in the contest. He is worthy of a place among the World's great leaders ; but in comparing him with Wellington, sometimes even to the latter's disadvantage, Henderson carries his admiration too far.

The victor of Waterloo, Talavera and Salamanca has earned a niche with the few. The man who could win battles with an army composed mainly of unreliable Spaniards and Portuguese, backed by a handful of British troops, against the seasoned veterans of France led by men whose fame was resounding through Europe, the man who successfully led an even more heterogeneous force against Napoleon's last furious bid for his kingdom, the man whose political genius swayed the whole of Europe for thirty years and finally rivalled in its brilliance his military achievements, is beyond comparison with one who gained notoriety in a mere domestic rebellion.

Napoleon's victories were the greater in quantity, but the lesser in quality. Henderson could, perhaps, have chosen him for comparison, particularly as Jackson modelled his actions on those of his great predecessor, and in many ways was the sounder of the two.

Napoleon's achievements also were at the expense of ill-trained soldiers, poorly led. Wellington, in India, had defeated armies fifty times his strength; but the feat was common enough to excite no more than a modicum of admiration.

Jackson must acquire all his merit from the fact that he took full advantage of the many opportunities offered to him, had an uncanny knowledge of the capabilities of his opponents, and took essential risks with a bravery which stamps him as a leader of distinction and a man without superior.

But this does not entitle his campaign to such a pre-eminent place among the chosen studies of the British army. And it has few of the characteristics of the type of small wars for which we train. If the U. S. A. must supply the campaign, that in the Phillipines in 1898 is peculiarly apt; but why ignore the most important of our own recent small wars?

The South African war was as typical of the varied conditions which may be expected as can be found anywhere. True, it was a series of blunders until Roberts assumed control; but this does not detract from its value as a medium of study. More especially if the actions of the enemy, and particularly of Generals Botha and De Wet, are closely noted.

They are romantic figures of great capabilities, merely needing the pen of Henderson to turn them into leaders of some fame; for the pen of Henderson was mighty; probably more so than the sword of Jackson.

LIGHT INFANTRY A HUNDRED YEARS AGO.

BY CAPTAIN H. R. K. GIBBS, 6TH GURKHA RIFLES.

His Excellency the Commander-in-Chief has suggested the study of Sir John Moore's system of training and employment of Light Troops as a stimulant to assist us in training along right lines to-day when both mechanisation and mobility loom so largely on the military horizon.

As a preliminary, an account of the evolution of Light Infantry and of their arms and methods of employment is of interest since it marks the real beginnings of what we now call the Fire Plan. This next brought into prominence the relationship between Fire and Movement. Put briefly, infantry tactics became a matter for study, and under Sir John Moore, Individual Training in the British Army assumed an importance hitherto neglected.

By the middle of the 18th century tactics had become stagnant in much the same way as they had by the end of the Great War, though from differing causes. Ponderous masses of troops then cramped initiative in much the same way as did trench warfare in the Great War. Frederick the Great's methods—outflanking movements with unwieldy, massed bodies of troops in close formation held the field until the Austrian tactics, at the Battle of Kolin in 1757, upset preconceived intentions. Parties of Light Troops skirmishing in loose and open formation so harried these masses moving up to their positions as to disorganize their dispositions completely and prevent them achieving their purpose.

Before proceeding it is worth while to pause and survey briefly, the development of the infantry firearm as it affected the British Army. Up to 1663 the only firearm in use with British Infantry was the Matchlock; later the Guards Regiments, and eventually by 1704, the whole army had the Flintlock or Firelock. This fired the classic "ounce of lead" bullet and was of $14\frac{1}{2}$ bore. Its range was severely limited and though theoretically effective up to 200 yards, the normal range was 50 yards at which the British volley was fired. Between the years 1674 and 1680 various units on the continent of Europe had rifled weapons but we still favoured the smooth bore weapon.

Our inferiority in infantry weapons was emphasised in North America during the period 1750 to 1780. The French Canadians and their Indian allies were armed with a rifle much superior in every way to our old musket. This together with their greater flexibility and rapidity of movement, culminated in 1755, in the memorable defeat of General Braddock's unwieldy columns which suffered casualties amounting to 75% of his force. The Seven Years War also rubbed in the lesson that we needed "bodies of marksmen armed with rifles."* This prepared the way for Light Infantry and Riflemen.

The rebellion of the American Colonists further pointed the moral. They were better armed and we constantly read of their marksmen picking off the British Officers as at Bunkers Hill on 17th June 1775. Foremost among those on the British side who recognised our needs was Ferguson of Pitfour, who in 1776 patented and demonstrated a breech-loading rifle which fired seven shots a minute with accuracy at 200 and 300 yards. He formed a corps of riflemen in that year which did good service in North America, but officialdom did not approve and Sir William Howe, suspicious and jealous of methods introduced without his initiative, took the opportunity of disbanding Ferguson's corps while their leader was wounded and placed *hors-de-combat*; the rifles were returned to store, and the British Army had to wait another 90 years before it had a breech-loading rifle.

Ferguson raised another body of "Sharpshooters" in 1780, but he was soon after killed at King's Mountain in North America.

In 1800 on their being raised, the 95th Regiment or The Rifle Corps, now The Rifle Brigade, were armed with the Baker rifle. This had a barrel of 30 inches, 7 grooves with a quarter turn and was a muzzle-loader firing balls 20 to the pound. It was sighted for 100 and 200 yards and was effective up to 300 yards.†

The improvements in the infantry firearm had their effects on tactics, noticeably on the continent of Europe. In 1774 a Frenchman, Mesnil Durand by name, wrote advocating the employment of small columns covered by strong bodies of skirmishers.

We have already seen how the French in North America, possessed of a better rifle than that of the British, exploited its value and

* Fortescue's History of the British Army, Vol. II, page 591 note.

† History and Campaigns of the Rifle Brigade, Part I.

harassed our columns with bodies of marksmen, so it is not surprising to learn that at Quebec in 1759, Wolfe countered Montcalm's skirmishing tactics with similar methods. The young Napoleon was quick to seize on this theory and formed his Light Troops such as Voltigeurs, Chasseurs à pied and Corps Légers. These he was able to employ with marked effect in his advance to Marengo in 1796. Napoleon, however, did not concern himself greatly with the improved firearm.

Up to about this time we do not hear much of Light Troops in the British Army. Various bodies had been formed but they were mere companies gathered together for a course of instruction in the new rifle and they were then sent back to their permanent units "to preach the gospel of the rifle." The 80th, 85th and 90th Regiments became our first Light Troops. In passing it may be noted that until the Forties of the last century, Light Infantry was not in vogue in the Indian Army. The first Light Infantry appears to have been the 1st Battalion 16th Regiment of Madras Native Infantry or Trichinopoly Light Infantry, so named in 1812 (now 3/8th Punjab Regiment), then followed the Rangpur Light Infantry in 1823 (now 1/6th Gurkha Rifles), and in 1826, 11th Sylhet Local (Light) Infantry Battalion, (now 1/8th Gurkha Rifles).

Then came that wonderful trainer of troops, General Sir John Moore. He quickly grasped the need of Light Troops and a better system of training and as soon set himself to attain his desires. During 1800, while at Minorca, he spent his time improving the discipline of the troops and adapting their equipment to light movement so as to reduce the amount of baggage on Field Service. From his biography published in 1834 we learn that Sir John advocated "not a new drill but a new discipline"* and self-reliance. Writing to his friend Sir Robert Brownrigg on 17th January 1803, regarding the type of men required in the Light Infantry Regiments he says, "The service of Light Infantry does not so much require men of stature, as it requires them to be intelligent, hardy and active. And they should in the first instance, be young or they will neither take to the service, nor be easily interested in it." From the same source we can also read of Moore's principles of training. "First it was necessary to have the officers efficient before the men, and to require of the officers real knowledge, good temper and kind treatment of the men. Secondly, that power should be delegated to officers commanding companies,

* "The Life and Letters of Sir John Moore," by James Moore.

the men to be taught to look up to them in matters alike of drill, food, clothing, rewards and most punishments. Thirdly, that all officers and non-commissioned officers were to understand that it was their business to prevent rather than to punish crime" (letter to Colonel Calvert from Sir John Moore).

At his training camp at Shorncliffe during the years 1802 to 1804 he insisted that all work should be as if in the presence of the enemy. For instance, he provided for signalling arrangements, outposts and patrols to ensure that the French could gain no surprise landing. All the troops were constantly practised in rapid camp pitching and striking, kit was to be divided into Service Order and Marching Order and in all Orders it was to be light.

The bed-rock of Moore's work of training was the enforcement of the company system, whereby a Company was made a real command and the Captain given the full responsibilities of such a command. It is of interest to note that in the early years of the Rifle Brigade under Colonel Manningham and Colonel Stewart, great attention was paid to these details and much of its training was in advance of the times. Medals were given for Good Conduct, Musketry Classification was introduced, a regimental school was formed and lectures and athletics formed part of the training of all ranks. The details may be found in Part I of *The History of the Rifle Brigade*. To the effects of this system we will refer later when speaking of the Peninsular War.

At this period there appeared a pamphlet in German written by Lieut.-Colonel Baron de Rottenberg, Commanding the 5th Battalion (Rifles) 60th Royal Americans entitled "*Regulations for the Exercise of Riflemen and Light Infantry and Instructions for their Conduct in the Field*." Originally written in 1798 this was translated into English and published for the War Office in 1808, by command of His Royal Highness the Commander-in-Chief.* After dealing with questions of drill and musketry instruction come two paragraphs which are of interest with reference to our subject.

The first is headed "*Formation of the Chain*," and goes on "the object of this branch of the duty of Light Troops is to scour a tract of country by means of numerous and detached bodies and clearing the woods and enclosures of the enemy's posts and, in a word, to establish a complete chain of your own troops, by occupying, as far as

* Published by T. Egerton of the Military Bookshop near Whitehall.

circumstances will permit, every advantageous spot, taking particular care, however, that your own posts are so stationed as to have easy communication and the power of mutually supporting each other." Our modern Field Service Regulations, Vol. II, further expands this idea, especially in Chapter 8, Section 80 and the chain is mentioned in sub-para. 4.

The second paragraph deals with "The Service of Light Troops in the Field" and states that "during the campaign Light Troops are usually cantoned in villages, and are not provided with camp equipage. They may, however, be occasionally required to occupy ground on the flank of a Corps in the line of encampment, the men must in that case, construct huts of earth or boughs of trees, and will perform all the camp duties, and in every respect comply with the regulations laid down for the discipline of regular infantry." As comment we may turn to the accounts of exercises and experiments carried out by Light Columns in Waziristan and the Kohat District during the last three years.

The Peninsular war was to prove the value of Moore's methods and it is doubtful if any campaign ever exemplified the prowess of any particular body of troops as did this war the deeds of the famous Light Division. We continually read of the 43rd, the 52nd, the 95th and the 97th Regiments being employed in extended order to cover the Line or to cover a retreat. The diary of a wounded French officer, who was captured at Vimeiro, is quoted in the History of the Rifle Brigade as recording. "I was sent out to skirmish against some of them in green—grasshoppers I call them; you call them Riflemen. They were behind every bush and stone, and soon made sad havoc among my men, killing all the officers of my company and wounding myself without being able to do them any injury."

The iron discipline of Crauford and Paget carried the Light Division through the horrors of the retreat to Coruña in 1808. Fortescue records that "the main body, with the exception of The Guards, moved as a disorderly mob. The Reserve (*i.e.*, The Light Divn.) always maintained their discipline."* The Rifle Brigade History, in referring to the small number of casualties sustained by the 1/52nd Light Infantry and the 1/95th Rifle Corps in the actions which defeated Marshal Soult's enveloping movement at Coruña, states: "This

* "The History of the British Army" Vol. VI, page 373.

small number of casualties among our men was unquestionably due to the fighting formations employed, namely a line of skirmishers. The 1/95th went into action about 750 strong and since they are stated to have extended 'so as to fill the gap of about half a mile' they were probably not closer together than two to three paces."

In summing up the action of the Light Division during the retreat to Coruña, Napier says...."for twelve days these hardy warriors had covered the retreat during which time they had traversed 80 miles in two marches, passed several nights under arms in the snow on the mountains, were seven times engaged with the enemy and had assembled at the outposts having fewer men missing, including those who had fallen in battle, than any other Division of the Army; an admirable instance of the value of good discipline." As Fortescue says, "like the Guards, they had faced the high ordeal of the march like disciplined men."

This indeed is a justification of the spirit infused into the troops by the training methods of Sir John Moore. Though political jealousies led to attempts to belittle the services that Sir John Moore had given to his country, Wellington writing in 1809 said "It is not easy to appreciate the positive benefits which the British Army derived from the talents and exertions of Sir John Moore. Repeatedly in the face of danger he animated his countrymen by his example and led them on to victory, yet, conspicuous as were his services in the act of combat, they were surpassed in utility by the effect of instructions and superintendence, in the hour of preparation for active warfare....The camp at Sandgate, where he had the opportunity of carrying through and exemplifying fully the effect of his plans, will long be recollected as exhibiting the perfection on military economy and discipline."

In concluding this article no better quotation can be added to the many given above, than that to be found in Chapter 23 of Volume VI of Fortescue's *History of the British Army*, which sums up Sir John Moore and the system that made the British Light Troops famous throughout the world in the last century: he says—"Beyond all question, he (Sir John Moore) was the very best trainer of troops that England ever possessed. His system, whether applied to a single regiment, or to the Light Brigade which he made so perfect at Shorncliffe in 1804, rested on one principle, that every officer should know his duty and do it, and should teach his men their duty likewise....

....The details of the actual movements in which he exercised them are immaterial, the essence of his training was the cultivation in all ranks of that self-reliance which springs from knowledge. Moore would not permit a battalion to depend for its efficiency merely upon the chance possession of a good Commanding Officer or a good Adjutant. Every Colonel must be able to teach his Captains, every Captain his Subalterns, every Subaltern his men. He recognised that, if officers are to feel an interest in their men, they must each one be trusted with the responsibility for them. Once this was accomplished, the troops could be employed as Light Infantry, *i.e.*, in dispersed order, the Colonel being content to leave each Company to its own officers, and the men confident alike in their Captains, their Subalterns and above all in themselves. Though the strictest of disciplinarians, Moore encouraged intelligence and initiative of the individual, treating soldiers as men not as machines; yet as a Commanding Officer, looking most carefully to the comfort of all....While the long roll of successful generals, governors and administrators that was drawn from the Light Division sufficiently proves his extraordinary powers of training men."

LETTERS TO THE EDITOR.

ESSAY.

SIR,

May I be permitted to refer to the Editorial comments on my essay on the Tactical Employment of Light Tanks in Co-operation with Cavalry, etc., in India, which was published in your October issue, and to make it clear that, though there are doubtless inconsistencies in the paper, the extracts quoted definitely do not constitute one.

On page 432 I stated that "if opportunity offers the Light Tank Company may well be sent on ahead of the Advance Guard to seize a tactical locality." On page 436 I then said "There is no question of their being asked to hold on to any specified piece of ground *as Infantry must do*. For this they are entirely unsuitable."

The sentences immediately preceding this latter quotation really explain why there is no question of inconsistency in the above statements. They are as follows :—

"It may not infrequently be advisable to send them (the Light Tanks) ahead of the Cavalry to delay the enemy's advance first at some suitable point beyond the latter's reach. This they are quite capable of doing by *adopting an elastic manœuvring rôle*, keeping concealed and open fire suddenly with only turrets exposed."

The crux of the matter is that Light Tanks, like Cavalry, must never, if they can possibly avoid it, surrender their mobility and anchor themselves to what they wish to protect, in the way that is forced upon Infantry by their comparative immobility.

Let us suppose therefore that Light Tanks have been sent on ahead to seize a tactical locality, *e.g.*, a river crossing or defile. Having got it, they will not sit on it. They will adopt an elastic manœuvring rôle beyond it, in order to hold it.

This is surely a basic principle underlying all Cavalry and Light Tank work.

I have, etc.,
"MANUSCRIPT."

THE PERIMETER WALL.

SIR,

May I make a few remarks about Colonel Pearson's article "The Perimeter Wall," which I read with great interest in your issue for January, 1934.

Not so very long ago the question of abolishing perimeter camps was being seriously considered on the frontier and was discussed with all solemnity at training conferences. Shortly afterwards the operations on the Kajuri plain took place and camps were immediately surrounded by defences reminiscent of the Hindenburg line, so elaborate and intense as to be almost ridiculous. That, for the time being, ended the abolition of perimeters, which had been actually practised during training by one Brigade in Peshawar District before the Kajuri plain operations took place.

The perimeter wall serves two purposes, *viz.*,

- (1) As a line of defence, which also gives a feeling of security to the troops in camp.
- (2) As protection against snipers.

That some definite line of defence is required will be admitted by everyone, but the curious thing is that as the years go by the strength and dimensions of the wall which it is considered necessary to erect round camps increases, although it is obvious that the danger of a camp being rushed is decreasing—as Colonel Pearson has pointed out.

Why is this? It is probably the result of the Great War.

The utilisation of the perimeter wall as protection against snipers seems to have fallen into disuse, probably because the soldier of to-day is nearly always provided with a tent to sleep in (the time will surely come when he will have a hot-water bottle also) instead of lying out in the open under the protection of the perimeter wall. This being the case, then the labour expended on building the elaborate wall of to-day is obviously wasted.

It is suggested that all that is necessary round a temporary camp is either a *low* wall, behind which as many men as possible can sleep for shelter against snipers, and to defend the camp if the necessity arises, or a shallow trench—broad enough for the men to sleep in—

actually on the perimeter. Which of the two is used will depend upon the ground. Digging is quicker and the open trench can be used (and has been used successfully in the past against very heavy sniping) in most places north of the Khyber, but in Waziristan and like country the Sangar wall will be necessary.

Either, however, can be constructed in an hour and a half provided the men really get down to it and the continuous trench or wall is much better than the line of small posts (suggested by Colonel Pearson), for the latter are difficult to site—particularly in broken ground—as there is always the danger of one post firing into another. Also, as has been pointed out previously, a continuous line of defence adds to the feeling of security of those in camp—a very important factor in frontier warfare—which in addition prevents the ingress of rifle thieves.

Thus it will be seen that a perimeter sufficient for the defence of the camp and for the protection of a large number of men from sniping can be constructed in a comparatively short space of time, *provided* that it be admitted that soldiers may be called upon (as they were in the past) to sleep out in the open. The actual number of men put on the perimeter will of course depend upon the likelihood of an attack, whether the ground is open and easily defended or broken and difficult, and how much cover from sniping exists within the camp area.

But how else to ensure the security of a temporary frontier camp without extra time or labour?

It is suggested that there are three crying needs on the frontier to-day, *viz.*,

1. Concertina wire, such as was used in the Great War.
2. Portable search lights, and many of them.
3. Light entrenching tools.

With regard to concertina wire, what could be better for the defence of temporary camps, and piquets? It is light to carry, very quick to put out and dismantle, the same wire can be used a number of times, and it is quite sufficient to stop a rush or to deter the sneak thief.

Its retention for use on the frontier was advocated many times after the War, but the thousands of miles of this invaluable obstacle which were available after the war appear to have long since disappeared to the scrap heap.

Instead we have retained only the universal pattern barbed wire, which is so heavy and cumbersome that for mobile frontier operations it either has to be left behind or, if it is carried, much extra transport has to be provided—and thus the tail continues to wag the dog.

With regard to search lights, there is no better way of ensuring security on the frontier and reducing the numbers of men on Sentry duty at night, than by light. If there is one thing the frontier tribesman fears and dislikes it is anything in the form of a search light. He hates light and will not come near it at night. It is true we have Verey lights nowadays, but then we had star shell (which were frequently used) in the past and, it is submitted, it is bad for discipline and morale, as well as being noisy, to have these lights being pooped off at intervals during the night.

Plenty of portable search lights would be a God-send and yet they are still as rare as the dodo on the frontier!

With regard to light entrenching tools, if we are to save time and have more time for fighting and marching, as Colonel Pearson suggests, we must have more tools to enable troops to get under cover quickly. The allotment of tools to a battalion is quite inadequate for the purpose, as it must be borne in mind that if protection against sniping is to be provided, every man and follower in camp must get under cover. Additional tools of the standard pattern mean extra weight and a great deal of extra transport.

Formerly each man carried a light entrenching tool. This was dropped—and quite rightly so—as it added to the weight already carried by the over-burdened soldier. Why not, however, give each battalion—in addition to their ordinary entrenching tools—a proportion of light entrenching tools to be carried on pack transport? They would be invaluable for the defence of camps and, the weight in proportion to the number of tools carried, would be far less than that of the standard pattern, many loads of which are at present humped along behind an army in motion on the frontier.

But, it will be argued, all this costs money—and there is none. So, I suppose, that's that.

Yours faithfully,

"SHIGGADAR."

MILITARY NOTES.
CZECHO-SLOVAKIA.

Formation of a Supreme Council for National Defence.

At a Cabinet meeting it was decided to establish a Supreme Council for National Defence, and the statutes and regulations for giving effect to this decision were approved. This concludes a series of efforts on the part of the Czech Government to introduce a better machinery for dealing expeditiously with problems of national defence.

The new Supreme Council will consist of the Prime Minister as President (subject to the right of the President of the Republic to preside when he wishes), and the Ministers of National Defence, Foreign Affairs, Interior and Finance.

The Inspector-General of the Army or the Chief of the General Staff will also take part in a consultative capacity. The Army Council and the Inter-ministerial Committee for National Defence will remain as auxiliary organs of the Supreme Council.

Changes in higher command.

The new year is marked by a big series of changes in the Higher Command of the Czech Army.

General Podhajsky, who has been Inspector General of the Army since 1927, retires at the age of 69.

General Syroty, the present chief of the General Staff, becomes Inspector General of the Army, his place as C. G. S. being taken by General Krejci from the Kosice Command.

General Prchala, the present Deputy Chief of the General Staff, goes to the Kosice Command in place of General Prchala, and is relieved as D.C.G.S. by General Kopal at present commanding the 5th Division.

The new C.G.S., General Krejci, is an ex-Legionary. Born in 1890, he was in the ranks of the old Austro-Hungarian Army, receiving a commission in 1915. Captured by the Russians in 1917, he joined the Czecho-Slovak Legion, where he rose rapidly, till at the end of 1918 he was commanding a division. After the war he attended the Staff Officers Course at Versailles and the Ecole de Guerre in Paris—reaching the rank of Divisional Commander in 1928, and the Kosice Command in 1932.

FRANCE.

Ecole Speciale Militaire de St. Cyr.

The Junior Term Cadets who entered the school in October number only 293 as compared with the normal entry of 400. No less than 2,003 candidates presented themselves for last year's entrance examination to St. Cyr.

The distribution to the various arms of the new entry will be as follows :—

Infantry	..	..	190 (including 20 for tanks).
Colonial Infantry	..	..	50
Colonial Artillery	..	..	3
Cavalry	..	..	30
Air Army	..	..	20
Total			293

Changes in the Higher Command—

The following new appointments have recently been noted :—

Regional Commanders.

8th Region (Dijon)	..	<i>General de Division</i> Pagézy, formerly Commanding the Artillery of the Paris Region.
9th Region (Tours)	..	<i>General de Division</i> Marin de Montmarin, formerly Commander of the 2nd Cavalry Division.
13th Region (Clermont-Ferrand).		<i>General de Division</i> Chédeville, formerly Commander of the 29th Infantry Division.
16th Region (Montpellier)		<i>General de Division</i> Besson, formerly Commander of the 15th Infantry Division.
17th Region (Toulouse)	..	<i>General de Division</i> Lafont, formerly Commander of the 4th Cavalry Division.

Other appointments.

General de Division Fredenberg to be G.O.C. Colonial Troops in France.

General de Division Moyrand to be Commander of the 29th Infantry Division, Nice.

General de Division Chabert to be Commander of the 43rd Division, Strasbourg, and the fortified sector of the Lower Rhine.

General de Brigade Loisseau to be *Sous-Chef de l'Etat-Major Général de l'Armée*.

Army reorganization.

Further measures to meet the big drop in the numbers of recruits who will be available for the annual contingent during the period 1936-40 inclusive have now been decided on.

In order to level out the trough of the "lean year" depression, only $11\frac{1}{12}$ ths of the total available contingent were called up last year, while only $10\frac{1}{12}$ ths are to be called up in 1934.

As the total annual contingent only just suffices to enable the present number of units to be maintained, the resulting shortage of men will necessitate the reduction to cadre of 15 battalions. For this purpose the regiments belonging to the five divisions stationed in the eight western regions of France have been selected. The infantry of these divisions will then consist of three regiments each of two normal and one cadre battalion of only 2 officers and 15 non-commissioned officers, whose especial function it will be to help train the reservists during their periods of training.

The whole of the equipment and armament of the disbanded battalions will be kept in the regimental store and will be used by the reservists when called up.

Further details of measures of reorganization which have recently been carried out have now become available.

As a result:—

(a) Two new types of divisional artillery regiments have appeared for mechanized infantry and cavalry divisions, respectively—

(i) *Régiment d'artillerie divisionnaire à tracteurs tous terrains.*—

This will apply to the three divisional artillery regiments (belonging to the 12th, 15th and 25th Divisions) which have been motorized this year.

(ii) *Régiment de division de cavalerie à tracteurs tous terrains.*—

This will probably finally apply to all five cavalry divisions.

(b) The six regiments of *Sapeurs mineurs* have now been divided into three categories, respectively for—

(i) Fortified regions.

(ii) Frontier regions.

(iii) Interior regions.

The three engineer signal regiments have also been reclassified as above, with a further sub-division of companies into *sapeurs télégraphistes* and *sapeurs radiotélégraphistes*.

The two engineer railway regiments have been divided into "normal" and "special" companies.

Training of Reservists, 1934.

Officers.

A total of 20,800 officers (compared with 17,203 in 1933) will be called up for reserve training for a period of 8 days for lieutenant-colonels and colonels, and 25 or 14 days for other officers with certain exceptions.

These officers will include—

- (a) 2nd lieutenants in the third year in their rank, and other officers who have not completed the necessary periods of reserve training.
- (b) Reserve officers doing voluntary training.
- (c) Officers doing their training with units holding the frontier fortifications.
- (d) Officers undergoing instruction in anti-aircraft units, *i.e.*, those of the *D.A.T.* (*Défense aérienne du territoire*) and *D.C.A.* (*Défense contre aéronefs*).

Non-commissioned officers and men.

The following reservists will be called up:—

- (a) *Disponibles* of the 1930 class.
- (b) *Disponibles* of the 1929 class and reservists of the 1926 and older classes who were previously given an overslaugh.
- (c) Non-commissioned officers, both *disponibles* and reservists, who although not belonging to the classes due to be called up in 1934, want to get their certificate and are doing their service voluntarily.
- (d) Reservists of the 1928 class (and those of 1927 and 1926 who received an overslaugh) allotted to *D.C.A.*, *D.A.T.* and frontier fortification units.
- (e) Auxiliaries.—*Disponibles* of the 1932 class.

All the above will do the normal 21 days, except those in Section

- (d) who will do 14, 7 and 4 days, respectively.

Formation of New Experimental Commission.

A recent decree announces the formation of a *Centre d'Etudes des Matériels Automobiles de Combat de la Cavalerie*.

This Commission was formed on 1st September as a result of the proposed increases in mechanization in the cavalry divisions, and is

intended to examine and report on the various new prototypes of cavalry armoured fighting vehicles. It will meet, as often as necessary, at Reims, the headquarters of the 4th Cavalry Division, which is being totally mechanised, or at the various training camps throughout the country.

It is expressly stated that no additional expense on account of personnel or accommodation is to be incurred by the new Commission.
Cancellation of Courses of Instruction.

Owing to the fact that expenditure, during the first 9 months of the past financial year, had been in excess of the credits allotted, measures had to be taken to effect corresponding economies before the end of the financial year.

These measures included the cancellation or postponement during the period 1st November to 31st December, of all courses of instruction except those to be held in the frontier fortification area, as well as of a number of exercises and manoeuvres which would normally have taken place.

Among the courses cancelled during the period in question is the *Cycle d'Information*, a course for senior colonels and generals of the army, which in the past British officers have been permitted to attend.

ITALY.

Reorganization of the police force in Italian Somaliland.

By Royal Decree the "Police Corps of Somaliland" is disbanded, and a company of the Royal Carabinieri officially styled the "Carabinieri Company of Italian Somaliland" is formed to take its place. Its duties are to enforce public order, and the observance of laws and regulations existing in the Colony. As regards discipline the company is under the local Headquarters of the "Royal Corps of Colonial Troops," but for all other purposes it is directly under the orders of the Governor of the Colony. Native non-commissioned officers and men of the disbanded Police Corps will be taken on the strength of the new Carabinieri Company. This change brings the Police Forces of Italian Somaliland into line with those of other Italian Colonies.

The Study of Foreign Languages by Officers of the Army.

A recent ministerial decree states that a competitive examination will be held during 1934, open to officers on the active list, for the purpose of selecting suitable candidates to be sent abroad for language

study. The countries selected are England, Germany and Hungary, and the numbers are 2, 4 and 2 respectively. The period of study in each case is 5 months. In addition to a language reward, a monthly cost of living allowance is also to be paid. The decree further states that it is probable that some of these officers will be attached to units of the foreign armies concerned.

Subsidies to Civilian Transport suitable for Military use in War.

A royal decree has recently been enacted laying down detailed rules for the application of the law of May 1933, on the subject of subsidized heavy motor transport for military purposes. The object is to encourage manufacturers to build heavy motor transport within certain specifications, and to ensure that owners who subsequently purchase these vehicles maintain them in an efficient condition.

The Ministry of War will publish annually a list of types of vehicles which, by virtue of fulfilling certain specifications, will be eligible for a Warrant of Conformity (Brevetto di Conformità).

Firms can obtain the inclusion of any of their products in this list by satisfying the Ministry of War that they fulfil specification.

Owners of listed vehicles can obtain a "Warrant of Conformity" from the Army Corps Commander in whose area they reside, subject to their vehicle being in an efficient condition.

The possession of this Warrant entitles holders to exemption from "circulation tax" and makes them eligible for a "good maintenance" reward for 3 years. The amount of this reward varies from Lire 3,500 to Lire 1,000 according to type, and to the state of the vehicle at the time of the annual inspection.

Creation of a Superior Technical Artillery Institute.

A Superior Artillery Institute (Istituto Superiore Tecnico d'Artiglieria) has recently been created with the object of centralizing all the scientific and experimental sections of the artillery arm, and embodying the results of their work into the various technical courses of instruction.

The Institute will be under the "Superior director of Artillery Technical Service" and will comprise the following sections:—

- (a) A section for the study of the scope and character of technical courses.
- (b) A section for carrying out tests and research, of a technical, physical, chemical, and ballistic nature.

(c) A test branch for portable arms.

(d) A workshop for the construction of models.

The Militia for Territorial Anti-Aircraft Defence (D.I.C.A.T.)

The D.I.C.A.T. (militia for Territorial A. A. defence), which is the new designation of the old D. A. T. (Territorial Air Defence), came into being by Royal Decree in February, 1930, and has been steadily elaborated ever since.

To the D.I.C.A.T. is allotted in peace time the preparator, and in war time the carrying out (in co-operation with the Air Force), of the A. A. defence of the country against hostile air attack. In peace the D.I.C.A.T. is subordinate to the Ministry of War for training, employment and equipment, and to the General Headquarters of the M. V. S. N. for all questions of recruiting, discipline and administration. In war it will be entirely under the Ministry of War, or supreme command.

Expenditure on the D.I.C.A.T. is met from M.V.S.N. funds, with the exception that expenditure on equipment is met by the Ministry of War, or by the Ministry of Marine, in the case of defended places of purely maritime importance.

The D.I.C.A.T. is at present organised into one Inspectorate of D.I.C.A.T. militia, four Inspectorates of higher formations of D.I.C.A.T. militia, with headquarters at Milan, Bologna, Rome and Naples, and 25 regimental commands. The above are permanent cadres. Regimental commands contain batteries, machine-gun companies, and observation and listening units in varying numbers.

All personnel of the D.I.C.A.T. militia are enrolled from men unfit for service in active arms, superannuated conscript classes or young men of pre-military age.

Inspectorates of the higher formations of D.I.C.A.T. militia, and regimental commands, are subordinate to the command of the Territorial Regular Army Corps in whose district they are stationed, in matters of training, employment and equipment, or at purely naval localities, to the naval commanders. The selection of localities to be defended, allotment of resources, and plans of inter-communication is also the responsibility of the General Staff of the Regular Army Corps concerned.

Local Corps Commanders may, after notifying the Inspector-General, D.I.C.A.T. Militia, order experimental alarm raids, &c., to

be undertaken, in order to test the readiness and efficiency of the D.I.C.A.T. units.

The D.I.C.A.T. has no duties in connection with anti-aircraft defence of armies in the field. This continues to be the responsibility of the Regular Army.

Appointment and Duties of Inspectors of Infantry, Artillery, &c.

By a Royal Decree dated 28th September, the regulations concerning the appointment of the Inspectors of Infantry, Artillery, Engineers, *Truppi Celeri* and Alpine troops, and their duties *vis-à-vis* the Minister of War, and the Chief of the Army Staff, are defined.

As regards the Minister of War, their duties are advisory and consultative, and it is laid down that the Inspector of Infantry, in view of the important characteristics of the Arm, with which all other arms must co-operate, is the special advisory organ of the Minister of War. For this reason his rank will not be less than that of Army Corps General, and may be that of Army Commander designate.

The remaining Inspectors are Generals of Division, though the Inspectors of Artillery and Engineers may be Army Corps Generals. *Vis-à-vis* the Chief of the Army Staff, their duties consist in making suggestions as regards organization, training, or technical equipment of their particular arm; and in compiling or revising regulations concerning the arm. In addition they carry out inspections of units and establishments, under the authority of the Chief of the Army Staff.

Institution of Special Badges for p. s. c. Officers.

Three special badges have recently been authorized for officers who have passed through the Italian Staff College (*Scuola di guerra*).

The badges are made of gold metal, with a blue enamel background and a gold device of the Italian Royal Eagle thereon. These badges are worn immediately above other decorations, or medals.

The three different types are for Italian *p.s.c.* officers, for foreign officers who have passed successfully through the Italian Staff College, and for officers who, though not *p. s. c.*, have qualified in General Staff duties in war.

Air Defence Exercise.

An exercise for the air defences of Milan was carried out on 29th and 30th October under the direction of General Rovere, President of the Inter-Ministerial Committee for Anti-Aircraft protection.

The exercise was designed principally to practice the various civil organizations connected with "passive" air defence.

18 fully equipped Aid posts were established by the Italian Red Cross, involving 51 doctors and some 35 motor ambulances. A fire brigade 330 strong with complete M. T. and equipment also took part.

Fasci Giovanili were much in evidence, fulfilling the duties of motor cyclist despatch riders for inter-communication, and manning a number of the observation posts.

All detachments wore gas masks.

No raid occurred during the 29th, but raids took place on the night 29th/30th between 1 a.m. and 3 a.m., and again in the afternoon of the 30th. Various points were indicated as having been struck by gas or incendiary bombs, and were dealt with by fire brigades, and first-aid detachments. Over 50 "Casualties" were provided—different armlets denoting stretcher cases, gas cases, walking cases, &c. The whole organization was reported to have worked very smoothly.

It is noteworthy that the night attack took place under a full moon, as this is the condition which it is assumed that enemy air forces would prefer.

PORTUGAL.

Army Mechanization.

A decree has recently been submitted providing for the appointment of a "Higher Motorization Commission" attached to the General Staff.

It will have the duty of advising on all matters relating to the mechanization and motorization of the army and co-ordinating the proposals of the various army Directorates.

In future the Directorates of the different arms and services at the War Ministry will be initially responsible for studying their own requirements in mechanical material, and the system, which has prevailed since March 1932, of all such study being carried out only by a Commission will be discontinued.

The new Commission will be composed of the Deputy Chief of the General Staff and a number of senior officers representing each arm of the service.

ROUMANIA.

Military Estimates.

The Military Estimates for 1933-34 provided for a total expenditure of 5,975,000,000 lei (equal to about £7,312,000 at par or about £11,490,000 at the present exchange rates). The total State Budget provided for a total expenditure of about 23,000,000,000 lei (about £44,250,000 at present rates) so that expenditure on the three fighting services amounts to about 26 per cent. as against 23 per cent. in 1932 and 29 per cent. in 1931.

Expenditure is on approximately the same scale as the previous year, and for purposes of comparison a table is appended showing the last three years' estimates.

As in previous years expenditure is divided into ordinary and extraordinary heads. The former includes only those items which are necessary to the bare maintenance of the services, all other items being included in the extraordinary votes, which are liable to cancellation in case revenue fails to reach the level estimated.

It will be noticed that in addition to estimates ordinary and extraordinary for the current year there is appended the sum of approximately 5,500,000,000 lei (about £10,500,000 at present rates) representing debts incurred on previous budgets.

Provision is made for the following establishment for all three services combined :—

Officers	..	..	..	16,596
Re-engaged non-commissioned officers	..		..	12,958
Artificers	..	..	..	813
Civilian Officials	..	..	..	4,316
Other ranks	..	..	..	119,653
				<hr/>
				154,336
				<hr/>

These figures (which include about 7,000 Cadets at Military Schools but exclude about 10,000 Calarasi (Yeomanry) Cavalry) represent an

average taken throughout the year and not the maximum strength of the forces during the training season.

	1931.	1932.	1933.
<i>Ordinary expenses.</i>	lei.	lei.	lei.
1. Personnel (pay, &c.) ..	4,341,000,000	3,114,750,095	3,285,873,291
2. Material (supplies, barracks, &c.) ..	2,912,000,000	1,227,102,382	1,591,006,160
3. Various ..	39,425,000	15,796,371	48,498,549
Total ordinary expenses ..	7,292,425,000	4,357,648,848	4,925,378,000
<i>Extraordinary expenses.</i>			
1. Personnel (exceptional expenses)	4,000,000	76,706,000	950,000
2. Material (re-armament) ..	2,899,500,000	1,490,168,460	1,048,672,000
Total extraordinary expenses..	2,903,500,000	1,566,874,460	1,049,622,000
Grand total ..	10,195,925,000	5,924,523,308	5,975,000,000
Debts brought forward from previous years ..	8,100,000	2,000,000,000	5,658,338,434
Total overall ..	10,204,025,000	7,924,523,308	11,633,338,434

SPAIN.

RECRUITING.

(a) *Ordinary Annual Contingent (non-privileged).*

The total of the "ordinary" contingent for 1933-34 was fixed at 95,950, a reduction of 8,550 on the previous year's figure. Of the above, 81,500 will serve in the Peninsula, the Azores or Madeira, and the remainder (to be decided by ballot) in Morocco and the other African colonies.

(b) *Reduced Service Contingent (Cuota).*

This contingent, for 1933-34, was fixed at 14,351 (against 15,385 the previous year) of which 9,727 will serve in the ranks for 6 months and 4,624 with the Instruction Contingent, which involves a maximum service of 3 months only.

Changes in the Higher Command—

(a) General Ruiz Trillo, Inspector-General of the 1st Army Inspectorate, becomes head of the President's Military Household, an appointment which has been vacant since March, 1933.

(b) General Rodriguez del Barrio changes from the 2nd to the 1st Army Inspectorate.

- (c) General Miguel Cabanellas changes from the 3rd to the 2nd Army Inspectorate.
- (d) General Lopez de Ochoa takes over the 3rd Army Inspectorate.

Pre-Military Schools.

With a view to preparing youths for their military service, twenty official schools are to be opened. Of these, sixteen will be in the Peninsula, organized under the sixteen mobilization and reserve centres in Spain, two will be in the Balearic Islands and two in the Canary Islands, organized under the four recruiting stations in the islands.

The colonel or lieutenant-colonel in charge of the respective mobilization centre or recruiting station will act as director of the school. The professional staff will consist of a minimum of three and a maximum of five, of which one will be responsible for the instruction of future infantrymen, another for that of mounted men, while a third will be a gymnastic instructor.

Each school will hold two 4-month courses a year, and classes will be arranged so as to interfere as little as possible with the normal occupations of the youths attending them. The maximum number of pupils is fixed at 400.

Youths desirous of having their military service reduced to eight months must attend a course at one of these schools. The age of admission is not fixed, but it is presumed that youths will be eligible to take the course at any time during the last two years preceding their incorporation. On completing their course, pupils are not examined but are given a record of their work. On applying for reduction of their military service, recruits will present this record to the units to which they are posted, and before incorporation they will be required to undergo an examination.

Issue of new mortar.

Mention has been made of the provisional adoption of a new 81 mm. mortar for use as a close support weapon in infantry units.

The War Minister has now been authorized to purchase 312 of these mortars and 5,424 shells at a total cost of 1,800,000 pesetas (£47,368 at the present rate of exchange).

Although the issue is intended to be on the scale of 2 per battalion in Spain and Morocco, it is probable that in peace only 1 per battalion will be issued to units in Spain, the other being retained in store for use on mobilization.

New recruiting regulations.

A recent decree amends the regulations concerning the incorporation of the *Cuota* contingent, which consists of privileged recruits who only serve for 6 months, in whatever unit they choose, and are not liable for service in Africa. Instead of joining up in one annual group, these recruits will, in future, be called up in two equal classes, on 1st January and 1st July, respectively. This policy will ensure a more equitable division of recruits throughout the year.

YUGOSLAVIA.

Changes in Army Organization.

Serbia, owing to the fact that she was engaged in a series of wars beginning in 1912, is already feeling the full effect of the "lean years" as regards the restricted numbers of fit man-power available for service in the fighting forces. As a result, though the normal number of formations is being maintained, certain artillery batteries and infantry battalions have had to be reduced to cadre. This reduction has spread over all divisions, but, as might be expected, the reductions are more numerous in divisions quartered in the interior, than in those quartered on the various frontiers. The Yugoslav General Staff have, however, made it quite clear that this reduction is only temporary and due to reduced man-power, and not to any permanent change in the organization of a division.

Air-Raid Practice.

Mock air-raids have been carried out during the month on many of the bigger towns—notably Belgrade, Zagreb, Skoplje, Maribor and Novisad. The following is an account of the raid on Belgrade.

At 2 p.m., on 2nd November, warning was given by observers from Slankamen (on the Danube some 25 miles from Belgrade) that enemy aircraft (12 machines) were approaching from the north, flying in the direction of Belgrade.

The alarm was given by sirens, whistles, church bells, &c., and the traffic was practically stopped, and people directed to keep off the streets. Town fire-brigades stood by and dressing stations in various parts of the town were manned. Detachments of students and boy scouts acted as stretcher-bearers, and were equipped with gas masks. A squadron of fighters from Zemun aerodrome (just north-west of Belgrade) took the air to meet the raiders. At 2-10 p.m. the raiders were over the city, and bombed the railway station, Zemun aerodrome, the Pančevo bridge over the Danube and other important targets. Rockets were dropped representing bombs. Direct hits were obtained on the Pančevo bridge, on an important power station and on Zemun aerodrome.

In the city, fire drill was carried out and anti-gas measures were practised. Sentries at the Ministry of War and Marine and other Government offices, wore gas-masks throughout the attack.

At 2-30 p.m. the defending fighters were considered to have beaten off the attack, and the "all-clear" sounded.

Night attacks staged for the same evening had to be abandoned owing to inclement weather.

TURKEY.

Formation of a Reserve Officers School.

The old military Lycée at Halicioglu which was closed in 1931 has recently been reopened as a school for reserve officers.

This is the first permanent institution of its kind in Turkey.

The course of instruction lasts 6 months, and covers the period in a reserve officers training between service in the ranks as a non-commissioned officer, and service with a unit as an officer.

The first commandant of the school is Colonel Nuri Bey, formerly Director of Military Intelligence in the General Staff at Ahkara.

FOR SALE.

"The Russian Campaign of 1914", General N. Golovine, C.B.
(Published by the Command and General Staff School, Kansas,
U. S. A.)

Copies may be obtained from the U. S. I. of India, price Rs. 10/-,
plus postage.



GENERAL SIR ROBERT A. CASSELS, G.C.B., C.S.I., D.S.O. (late) G.O.C.-in-Chief,
Northern Command, India.

The Journal
OF THE
United Service Institution of India.

Vol. LXIV. JULY, 1934. No. 276.

The views expressed in this Journal are in no sense official, and the opinions of contributors in their published articles are not necessarily those of the Council of the Institution.

EDITORIAL.

We heartily congratulate the authors of that long-overdue Indian Defence, pamphlet, "Some facts and figures about Indian Defence." Written, we imagine, mainly for the civilian, the facts and figures given will be illuminating to the great majority of soldiers. Very few of us have a complete picture of what Indian Defence means; most of us imagine that a good deal more can be done with the amount allotted in the Defence Budget. Probably no part of Government expenditure gets more public and private criticism than it does; and this is due almost entirely to ignorance. The pamphlet lays all the cards on the table, and should ensure that uninstructed criticism of so-called military extravagance is less frequent. The present budget stands at about Rs. 46·20 crores, of which over Rs. two crores return to the Exchequer in the form of customs duty, income-tax and other taxes, railway transport charges, post and telegraphs, and printing and stationery. Sums of Rs. 158 crores and Rs. 77 lakhs are spent on the R. A. F. and R. I. M. respectively, and nearly eight crores represent the cost of pensions, including Great War pensions. The cost of the Army therefore is just over Rs. 33 crores now, and when prices become more normal and cuts in pay are restored, will be about Rs. 35 crores. When we consider the vastness of the country, and the complexity of its problems of defence and internal security, this is not a large sum, and even the most carping critic, when he has read the pamphlet, cannot but help feeling that we are, if anything, under rather than over-insured.

The question of insurance naturally takes our thoughts to Disarmament. The majority of us must be bewildered and almost blinded by the kaleidoscope which international politicians, abetted by the press, are presenting us. The feature of the whole series of negotiations which disturbs us most is that no nation except Great Britain appears to have taken them seriously. Other nations, rightly realizing that the millennium has not been reached and that mutual antagonism is more likely to hold the field than international agreement, have taken good care that their armed preparations for war and security are not influenced. We have adopted an optimistic attitude, and have allowed our armed strength to sink below the minimum essential even for our security. What is the result? We are powerless to implement the various misguided guarantees we have given in the interests of peace and are even less in a position to influence the international situation than we were in 1914! There are however welcome signs that the writing on the wall is being regarded. Mr. Baldwin's recent speech foreshadowed the raising of an Air Force to the same strength of that of the strongest power in Europe; and as the spokesman of the present government, he must be voicing the intentions of that government. What is more comforting is that the government must feel that the public is realizing our danger, and becoming uneasy at a continued policy of under-insurance. How can it be otherwise when it is realized that our Navy and Army have been whittled down to shadows of their former selves and that our Air Force has fallen from the first to the sixth place in fifteen years? Is there not a shiver or two of apprehension when we learn that there are twelve million soldiers in the most enlightened part of the world, to keep the peace? What real sense of security does the League of Nations give us when we see it flouted by Japan and Germany?

It is an established fact that the chances of war in 1914 would have been greatly lessened if Great Britain had been strong enough to have said that she would have no nonsense and to have shown that she meant it. Peace in the world is more to the interest of our "commonwealth of nations" than perhaps to any other. To do our share in keeping the peace, we, possibly more than any other nation, need a strong arm and a stout truncheon. Let us ensure that we have both.

We have included in this number two unusual articles but we think they will be of interest and assistance to many of our readers.

The article on "Shikar" by that very well-known authority, Colonel Ross, will help many to solve the problem of what to do on short leave in India. It should also help to prevent any more of those unfortunate instances of injury to sportsmen and their beaters which have been fairly common in the jungle recently. Many of us come to India thinking it a sportsman's paradise, and are sadly disillusioned, mainly because we do not know the way to set about things. If we are prepared to work for our sport, there are red-letter days ahead with rifle and with gun for all of us still, at a cost comparatively smaller than in any other country in the world. The rules for game preservation now being framed in the various provinces should ensure better and more accessible sport for the legitimate sportsman. In this connection, we would like to draw the attention, of all our readers, to the Review of the pamphlet "Wild game preservation in India," which will be found under "Reviews" in this number.

The article on "Ski-ing in Austria" contains information which both the expert and the novice skier may find most useful. For a ski-ing holiday, many must have thought of Switzerland but ruled it out on the score of expense. First-hand and reliable information about Austria is hard to come by, and it is hoped that this article will supply the want and show that a reasonably inexpensive holiday may be spent there amid delightful surroundings and on ground which suits everyone, whether skilled or unskilled.

We had hoped to include an article on the short two months' trip to Japan, which is becoming so popular, but space forbids. We trust that our Japanese friends will not misconstrue the reason for the popularity of this trip; we can assure them that the possibility of seeing their delightful country at very moderate expense is the reason. We get a chance to breathe a different atmosphere and to see for ourselves the beauties of the Far East; our wives, if we take them, look forward to buying the "stuffs" which are so dear to their hearts, and so cheap for their (our ?) pockets. We wonder if these trips to the Far East have any effect on the number of visitors to Kashmir. We venture to think that it must be so. We are not alone in thinking that the present

policy of the authorities in Kashmir is to make things as expensive as possible for the visitor. The cost of licenses and taxes of every description continues to rise and the time does not seem far distant when a holiday in Kashmir will be reserved only for those to whom expense is a small consideration.

"F. S. C." who has written the article "SOUR GRAPES" in this number is not an isolated voice crying in the wilderness.

The Staff Colleges.

The two main points in his argument are that the military education of the regimental officer is generally neglected, and that the present numbers of officers trained for the staff will be quite inadequate when war breaks out. His solution to remedy this is to double or even treble the number of entrants to the Staff Colleges, let the "goats" pass out after a year, and the "sheep" go on to do the second year; the "goats" will fill the junior staff appointments and form a reserve for war; the "sheep" will form the cadre from which eventually the higher grade appointments will be filled. We learn from some of our friends, whom "F. S. C." classifies as lucky, that this subject has been discussed and debated, almost *ad nauseam*, at the two Staff Colleges for years, and that the consensus of opinion has always been that the present system is the best, and that a two years' course is necessary for every student. In spite of this, there are strong arguments for an alteration in the system. Expense, as suggested by "F. S. C.," will probably rule out increasing the number of first year students. Without going into figures, the extra cost would come under the following headings:—an initial and non-recurring sum for the provision of the accommodation for the extra instructors and students, and annual amounts to cover the upkeep of this accommodation, transportation charges to and from the Staff College for the extra instructors and students, pay of the extra instructors, and additional expenses to the touring grant and contingent account. We are not in a position to work out what this will come to, but both the initial expenditure and the recurring annual cost would, we think, be fairly considerable. However desirable it may be therefore to increase the number of students, the measure is bound to be ruled out of any future Defence Budget, especially an Indian Defence Budget. We think that "F. S. C.'s" system of passing only the "sheep" on to a second term would cause more dissatisfaction even than the present system.

So much for destructive criticism. "F. S. C.'s" suggestion contains the germ of another system which has found some supporters both among p. s. c., f. s. c. and other officers. The present Staff College course is divided into two terms of one year each ; generally speaking, in the first term, the work of the lower formations is taught, and in the second year, that of the higher formations. It is claimed that, in a year, a student can be taught to be quite a wise "owlet," wise enough at any rate to fill adequately the junior staff appointments in peace and war. It is contended that we are trying to train a comparatively young officer as a commander or a senior staff officer of an Army or a Corps, and that we are wasting his time in doing this. It is further represented that by the time he has reached the age, (we might, with a certain amount of truth, say old age), for the command of a higher formation, the teaching of that last year is enmeshed in a forgotten cobweb in his brain, and only very occasional desiccated fragments drop into the light !

The suggested system divides the Staff College Course into a junior course and a senior course, both of a year each but not taken consecutively. For the junior course, students would be selected as at present and pass out to fill the 3rd and 2nd grade appointments. The senior course would consist of senior officers, nominated irrespective of whether they have passed the junior course or not, and from these, formation commanders and senior staff officers would be selected. If the vacancies were kept at their present figure, no extra expense, except in the upgrading of possibly four instructors from 2nd to 1st grade, would be involved. The results of this system would, it is claimed, be excellent. There would be hope for all, whether p.s.c., f.s.c., or f. t. t.e. (this, being interpreted means, those who failed to take the examination), of being chosen for the senior course, and the feeling that p. s. c. officers only can expect to reach the higher appointments would disappear ; the selection of officers for these higher appointments would be simplified ; and the ideas and methods of our senior blue-eyed boys would be modernized.

In conclusion, we venture to think that it could all be simplified if the stream was not so sluggish, and the headgates opened more often. Can't the Army take a lead from the Navy ?

No one knows what they can do without, until they are forced to do without it. In War, many soldiers are
 Cuts. amazed (and probably disgusted) at the small amount
 of food and drink which is necessary to keep body and soul together.

For short periods, all realise the necessity and accept the situation. To be kept too long on short rations is apt to undermine both health and, what is more important, spirits. No general keeps his troops on a "hard" scale for any longer than is necessary.

We wonder then how much longer the cuts in pay will continue. Recently we were assured in a valedictory speech that the finances of the Government of India were in as sound a position as any in the world to-day. We all accepted without a murmur these cuts in the time of crisis, but the crisis having passed, the necessity for a "hard" scale of pay has also passed.

Let us hope that 1935 will see a "Sunshine budget" in India; or should we be expecting too much if we asked for something more appropriate for the exile in India—a "Monsoon budget"?

JAPAN AND MANCHURIA.

BY MAJOR M. E. S. LAWS, M.C., R.A.

The independent state of Manchukuo now appears to be firmly established under Japanese protection, and the moment is opportune to consider how far the virtual acquisition of Manchuria will assist Japan to solve the very serious economic problems which confront her. The matter is of particular importance since Japanese policy must to a considerable extent be guided by economic necessities.

Japan's Economic Problems.

Japan, with an area of 24,600 square miles (of which only one-sixth can be cultivated), has a population of $66\frac{1}{4}$ millions. To put it differently, a country rather smaller than California contains over half as many people as the whole of the United States. With 2,750 people per square mile, Japan is the most densely populated country in the world. Though in the past the population has increased very rapidly at the rate of about one million a year, there are several factors at work which have recently tended to reduce the birth rate. The economic depression has resulted in fewer and later marriages, while birth control propaganda has made important headway throughout the country. As a result it is reasonable to assume that the rate of increase of the population will tend to fall in the future, but the effect of these influences on industry cannot be felt for some considerable time and the critical period will be during the next two decades. During this period the population is expected steadily to rise to a total of at least 85 million and it therefore follows that the problem of how to support this number must be solved in the immediate future.

There are two possible solutions. Either the surplus must emigrate or Japanese industry must be stimulated so as to absorb more workers. It is estimated that within the next ten years, nearly 9 million more workers will have to be dealt with by one or other of these measures, so that the problem is indeed a pressing one. How can the control of Manchuria assist Japan in her difficulty?

The question will be considered under three headings as follows :—

1. Manchuria as a Field for Direct Emigration.
2. Manchuria as a Source of Raw Materials.
3. Manchuria as a Market for Manufactured Goods.

Manchuria as a Field for Direct Emigration.

It has been suggested that Manchuria will provide a suitable outlet for Japan's surplus population, but it is very doubtful whether this is in fact possible. It must be remembered that prior to 1868 no Japanese was permitted to leave the country, and in consequence there is no tradition of emigration such as exists elsewhere. Furthermore the Japanese peasant is accustomed to intense cultivation of heavily fertilised and irrigated land in his own country, and Manchuria requires very different methods. The climate of Manchuria is very severe and Japanese emigrants can only survive if they maintain a high standard of living. Thus, while the Chinese inhabitant is content to live most simply in a mud hut and to eat soya bean and kaoliang, the Japanese can only exist if he is well fed on rice and fish and is well clothed and housed. Japanese labour cannot therefore compete with Chinese labour under Manchurian conditions, and for this reason it is economically impossible to substitute Japanese settlers for Chinese. There are, however, comparatively numerous openings for Japanese officials and professional men.

Manchuria as a Source of Raw Materials.

At present 7 per cent. of Japan's total imports come from Manchuria. It is hoped to increase this figure very considerably in the near future, but unless Manchuria can provide raw materials of suitable quality and at an economically advantageous price, Japanese industries will not benefit. At present Japan's imports exceed her exports and this unfavourable trade balance is not entirely wiped out by invisible exports such as shipping. As her imports consist very largely of commodities required for her industries, any attempt to restrict these imports would automatically reduce exports and thus reduce employment.

In this difficulty Japan has turned hopefully towards Manchuria as a possible source of supply of cheap raw materials. With such a source of supply under her own control, Japan would be largely independent of foreign countries for raw materials and would thus

be better able to compete with her trade rivals in time of peace and to maintain her industries in time of war.

Japan is at present dependent on foreign countries for her entire supply of raw cotton, wool, rubber and nickel and for 90 per cent. of her iron and 75 per cent. of her lead, zinc, oil and chemicals. How far can these essential commodities be supplied by Manchuria?

The soya bean, which is used as a food, as forage and as a fertiliser, is at present Manchuria's most important export. Modern research has however led to the introduction of certain chemical fertilisers which are cheaper and more efficient than the soya bean, so that it is probable that as a fertiliser at least exports will decrease in future. It is doubtful whether Manchurian soya beans, millet or maize will ever displace rice as the staple article of Japanese diet, and unless this occurs it is difficult to imagine any great expansion of trade in these commodities. Very little rice is now grown in Manchuria, and in order appreciably to increase this crop it will be necessary to spend much money in irrigation schemes. Since Japan is for the moment able to grow all her rice requirements, it is unlikely that any serious efforts will be made to increase Manchurian production.

The cotton now produced in Manchuria is admittedly of very poor quality and insignificant in quantity. It is useless for Japanese requirements, though in ten or fifteen years' time both quality and quantity could be improved. Until then there seems no possibility of Japan being able to do without foreign cotton. A similar situation exists as regards wool. Until the Manchurian sheep can be very greatly improved—and that is a matter of many years—there is little likelihood of Australian wool being replaced on the Japanese market.

As regards minerals, Japan is chiefly interested in iron since she herself can supply barely a tenth of her annual requirements. Manchuria undoubtedly possesses large quantities of iron ore, but it is unfortunately mostly of very poor quality. It is obviously economically unsound to export ore of low ferrous content, and to build up an iron industry in Manchuria to use such material is admittedly hazardous. It is significant that the largest ironworks in Manchuria (operating under Japanese management) have never yet succeeded in making a profit. It would appear therefore that while Manchuria

can supply Japan with iron, it will still remain economically wiser to import better quality ore from foreign countries with well established industries.

Though Manchuria possesses no free oil, there are limited quantities of shale from which oil can be extracted. Up till now, however, it has been found that shale oil cannot compete commercially with natural oil owing to the high cost of production. Though Japan may consider it desirable to develop the production of shale oil in Manchuria in order to have supplies available in time of war, it is doubtful whether such oil can ever be delivered in Japan at a price low enough to compete with Russian and American oil. Even then Manchuria cannot hope to provide all Japan's requirements, unless a profitable method of extracting oil from Manchurian coal can be devised.

While Japan produces sufficient coal for her own needs, she has to import a particular type of coal for certain of her chief industries. Manchuria has limited supplies of this particular sort of coal, but after her own needs have been met she will not be able to supply all Japanese requirements. As regards ordinary coal, Manchuria can produce considerable quantities at cheaper rates than that mined in Japan, but by doing so she will compete with an already thriving Japanese industry and will naturally arouse opposition from the vested interests concerned.

Certain other minerals are known to be available in Manchuria, notably copper, lead, zinc, gold and asbestos. These will undoubtedly prove of considerable value to Japan in the future. Timber also is plentiful in the new state and a big increase in this trade with Japan may be shortly expected. At present, Japan obtains only about one per cent. of her timber requirements from Manchuria.

It will be seen therefore that there is little likelihood of Manchuria supplying Japan with any considerable quantity of raw materials in the immediate future, though in time this trade should develop so as to make Japan far less dependent on foreign supplies of certain essential requirements.

Manchuria as a Market for Manufactured Goods.

In order to increase her industrial output, it is obvious that Japan must develop her present markets and find new ones abroad. Her efforts in this direction have in recent years met with considerable

success, but only in the face of bitter opposition from those countries which found their home markets flooded with cheap Japanese goods. Already efforts have been made to close many of these markets and thus Japan is becoming more and more interested in the possibilities of Manchuria as a buyer of manufactured goods which will be required as the new state develops. Since Japan is now virtually in control of Manchuria and is thus in a position to formulate her trade policy, it is of interest to consider the possibilities of the new state absorbing the output of Japanese factories in return for raw materials. The control of a steady market in Manchuria would stimulate Japan's industries and thus help to absorb the growing population for which work must be found.

Japan's chief exports to Manchuria at present consist of cotton goods, machinery, steel, refined sugar, flour and paper. The raw materials from which these manufactured goods are made are not produced in Japan and the finished articles are merely re-exports. There seems however no reason why Manchuria should not herself supply most of these raw materials in time, and it is probable that, with cheap labour available, she will later be self-supporting as regards many of the items now imported from Japan. But for some years to come Japan must supply most of these articles. Naturally Japan will attempt to guide Manchurian development along those lines most favourable to herself, but such a policy must be very carefully handled if fierce opposition from the Chinese settlers in the country is to be avoided. A further and more pressing difficulty which will have to be overcome before Manchuria can be developed concerns the provision of capital and in this respect Japan is not in a strong position. But until money is available to open up the country and thus increase the quality and quantity of its exports, Manchuria will be unable to buy the manufactured goods which Japan is able to supply. The service of defence and internal security is still a very costly item in Manchuria and there seems no probability of this expenditure being greatly reduced in the near future.

Summary.

It would seem therefore that Manchuria is unlikely to be able directly to absorb any appreciable proportion of Japan's surplus population. As a suitable source of supply for raw materials, Manchuria has considerable possibilities, but the country needs to be developed before her produce can be made available and Japan's

needs are urgent. Similarly, Manchuria will undoubtedly in time absorb vast quantities of Japanese manufactured goods, but without strong financial assistance she cannot do so immediately. It will be observed that the whole problem is greatly complicated by the time factor. Under normal conditions Manchuria would develop steadily along conservative lines and would in due course build up a valuable trade with Japan. But Japan needs relief now and during the next ten or fifteen years when the pressure of her growing population will be most heavily felt. After that period it is confidently estimated that the restrictive measures already in operation will have become sufficiently effective to keep the birth rate steady. It remains to be seen therefore whether Japanese energy and ingenuity will be able to develop the new state sufficiently widely and quickly to enable the home industries to be further expanded and thus provide the growing population with a means of livelihood.

The matter is a vital one for Japan. Whether she was wise to use force in order to obtain control in Manchuria is a matter of opinion, but no clear outlook on the question can be obtained unless the time factor in Japan's population problem is taken into account. It was this same time factor in the population problem which decided Japan to use force in establishing her claims in Manchuria in preference to the less costly but slower method of peaceful penetration. Whether she was wise in making this decision is debatable, but that she will attempt to carry it out regardless of cost cannot be doubted.

SPORT IN INDIA.

(A LECTURE GIVEN TO THE OFFICERS OF THE LANDI KOTAL
BRIGADE IN 1932).

By E. J. R.

At first sight it looks as though some apology were necessary for appearing at a military lecture, and before a purely military audience, to give a discourse with such an unmilitary title. But, I think, that, if you pause and consider, you will agree with me that this subject of sports is not so unmilitary after all.

It seems to me that there are other things you want in a soldier than knowledge of drill books, other things than chess board skill in handling of troops.

You want a quick eye for country, the eye which can not only tell what is on this side of a hill, but which can guess what is on the other side as well. You want the faculty of finding your way with ease across a strange country. You want the power of dealing with men—with all sorts of curious men in all sorts of curious situations. And above all things you want the power of making decisions quickly and coolly in moments of emergency.

All these things, and many more besides, I maintain you can develop and cultivate better on your leave, when you are shooting, fishing or pigsticking in out of the way places—better and more efficiently in a shorter time—than you can in years of normal military parade ground and manœuvre work.

Then there is another point—perhaps the most important from the military point of view—the happiness of officers living in this country. Again and again one meets units whose officers are miserable in this country, who loathe the country and all its works. A unit in that state is bound to be below its form, and below its proper military value. It is not its own fault. It only means that fellows in it have never discovered what a splendid time they can have in this country if only they set about it in the right way.

I know it is a wretched country for the fellow whose tastes run entirely to social activities, to dancing, cocktail parties, and poodle faking. But, taking it all round, there are few countries in the world

which offer more opportunities to the sportsman, or to the young fellow, who has somewhere in his bones the love of rod and rifle and horse. A fellow like that can have a really first class time in this country, and if I can only persuade one or two of you who have not done so to give it a try, I will feel that I have not wasted my time or yours.

But first of all there is one rather damping thing I must say to you. If you are going to have much success in the line of sport in this country, you must somehow get to know something of the language. This sounds rather like hard work. As a matter of fact it is a very easy business. If you get down to it for half an hour a day, learning a few words, and keep a servant who speaks no English so that you have to talk to him in his own language, you will soon find you know enough for all practical purposes. I know it is a sweat, but you will very soon find it is worth it, and your sport will be improved by 60 *per cent.* and your pleasure in it by 90 *per cent.* as soon as you find you can yourself deal direct with the inhabitant.

Probably the most sporting fixture of the year in India is the Kadir Cup meeting. There one meets the very pick of the youngsters in this country. They are mostly cheery lads from British cavalry regiments, horse gunners and the like. They are on the average well off, at least according to Army standards, and they are all light-hearted enthusiasts who would as soon break their necks as not. Yet I was surprised last year, to discover that most of them had sweated quite a lot at the language. They find that they cannot get the best out of their pigsticking unless they know something about it, unless they can talk to the shikaris, the villagers and so on. It is well worth it.

Now, I am dealing with an enormous subject, on which hundreds of books have been written by people very much better qualified than myself, so I am going to confine myself to very general lines, and I will begin by running round the map a bit and showing you what sort of sport is in reach of various parts of India. After that I will go into more detail on the subject of shooting, for that is, I think, the business which appeals most to the majority of people.

To begin with, there is one thing which I want to say to you. Don't you believe the fellows who tell you that India is played out from the sporting point of view, that it is all shot out, and all that

sort of thing. It is very far from it, and actually, in the more out of the way jungles, there is probably more to shoot than ever there was. Where cars can go, and near big towns of course, there is not much doing. But way back in the Government forests there is definitely more game than there was twenty years ago, especially tiger.

Further, you will find the simple villager is just as decent as ever, and quite as helpful. You will find the jungle man is still the same, funny, shy little savage that he used to be. He is shy of giving information, but if you can talk to him yourself, and not through a domineering and corrupt servant, you will find he is just as ready as ever to help. He is usually like a monkey, he is always dirty, but he is a decent bloke at heart, with a sound taste in rum, and if he once gets to know and to trust you, you will be amazed at the amount he will do for you.

And now let us turn to the map and get a general idea of what sport is to be got in various parts of the country.

Let us start from the North-West corner, where we are now. Even from here, in the Khyber, you can get quite decent fishing and shooting on only a few days leave. First look at this series of ranges, which run all across from the Indus towards Pindi and Jhelum. These are the Salt Ranges and the Kala Chitta. In the cold weather you can get very pretty shooting on them, both large game and small. Firstly there is very excellent oorial stalking. They are well preserved, the heads run big, and there are lots of them. They are all in reserved forests, and you can get a pass for a week or a fortnight by application to the Deputy Commissioner concerned. Good heads run 30" or over and with luck and care you may get one of 33" or 34". The stalking is very pretty, ibex shooting in miniature, and the whole trip is definitely easy. There are shikaris, very good ones, licensed and registered in each block, and when you write for a pass you can get a list of shikaris as well. You could easily get on to the best of the ground in 1½ to 2 days from here.

From here also, you can get quite decent fishing in all these streams down Pindi and Hassan Abdal way—the Chiblat, the Hurroo and so on. If you take 10 days leave, and adjust it properly and really bustle along, there is no reason why you should not be able to put in a week on a Kashmir trout beat. I did it myself some years ago from Kohat, and very good value it was.

Kashmir proper is really not much of a shooting country. Bits of it are good, but as a rule you won't do much good unless you get away over the ranges to the North or East. In two months, however, you can shoot in Asthor or the Kajmag, all of which hold good markhor, and you should get both red and black bear, and some odds and ends as well. First leave is the time for that, or right at the end of the season.

You won't get on to decent ibex ground, however, unless you can get away for three months, as generally speaking there are no good heads south of Baltistan and Nubra. If you have three months, however, you have your choice both of these or of Ladakh and the Changchenmo. In the latter you can get ammon, bhurrel and Thibetan gazelle. You will find, however, if you go far afield like that, it will be a very expensive business, for the cost increases by an arithmetical progression the further North and East you go. It is not carting your own kit which costs so much. It is the fact that you can get no supplies for your men. And when you have to carry food for your coolies as well as yourself your transport bill goes up by leaps and bounds.

If you want a fairly cheap and very delightful trip I can think of nothing better than a month after barasingh in the autumn, in some of the nullahs leading out of the Kashmir valley itself. The stags are fit to shoot by the middle of September, and it is just then they begin their annual migration into Kashmir over the passes from the North West, before they start to rut in the Kashmir nullahs. There are splendid heads to be got, and the barasingh is a first class beast and a gentleman. It is easy work for a beginner, and it takes you into a perfect country, while you will get some bird shooting as well.

East of Kashmir lies Chamba another first class hill shooting country. Here you will get tahr, ghural, serow and lots of red and black bear, while if you go farther afield, you can get on to ibex and bhurrel ground. The ibex, however, are small and a 36" ibex in Chamba is as rare as a 42" in Baltistan. But it is a ripping country, and easy to get to and to travel in. Again you want to go there either early or late, and avoid July and August. Chamba is, I think, the best of all hill countries for a beginner to make a start in. Conditions are easy, travel is easy, and the shikaris are definitely good and less spoilt than the Kashmir ones.

East of Chamba the hill shooting begins to die away a bit and travel is more difficult. But in Kulu, if you march hard and go high, you can get bhurrel and tahr. In Kulu too there is first class trout fishing, and there is better still in Mandi, close to the Kulu Road. The year before last I was lucky enough to get a 14½ lb. trout there, and I have no doubt there are some bigger ones about.

That about ends the list of hill shooting countries, but as you go eastwards again you get into the real jungle countries. If you look at the map you will find that eastward from Kalka, all along the foot of the main hills, there lies a great belt of jungle which runs practically unbroken till it merges into the great forests of Assam. All this is full of game; tiger, sambhor, cheetal, swamp deer and so on. From the Dun eastwards to the Nepal frontier, there are probably more tiger to the square mile than anywhere else in the world outside Nepal itself. Most of these jungles are fairly accessible, and anything from a fortnight to a month's leave gives you ample time for a shoot. I am going to talk about this sort of shooting later, so I won't say more about it now. Let it suffice to say that there are lots of tiger in these jungles and nearly everywhere there is excellent fishing as well, so that with a bit of luck it is no great feat to catch your mahseer, and shoot your stag and your tiger all in the same day.

Just south of this belt lies the great pigsticking belt of Northern India, the Ganges Kadir, the Jumna Kadir, and the banks of the Gogra and so on—centered on Delhi, Meerut, Muttra, Lucknow, Cawnpore and Bareilly and he would be a difficult man to please who couldn't find somewhere to spend a delightful leave from any of these places.

East again you will find Assam a delightful place to shoot and fish in, and in decent reach of Calcutta. You can get bison, buffalo and elephant and some of the jungle holds rhino: as well, if you can get leave to shoot them.

You have not to go very far south when you get into shooting country again. Nearly all the Central Provinces are in reach of good shooting. There are not quite so many tiger there as there are in the U. P., but on the other hand the jungles are, as soon as you get off the beaten track, less shot over, and the tiger are easier to get. You haven't got the same unbroken stretches of jungle, while water is scarcer and game is more localised. A great many of the C. P. jungles hold bison too, particularly Hoshangabad and South Chanda, while

the sambhur there are the best in India. You have, however, farther to travel by road as a rule to get to the better jungles, and that makes it a bit more expensive than the U. P.

Bombay Presidency is not much of a sporting country until you get down to the very tail end of it, but some of the Southern jungles in Kanara and so on are quite first class both for tiger and bison, and are in easy reach of places like Belgaum. Actually Kanara is about the only place in India where they will not only let you, but encourage you, to shoot elephant, and though there are not many good bulls about you can still find a few.

From here South to the very tail of India there is shooting and fishing in reach of you everywhere if you take the trouble to look for it. Mysore, Coimbatore, the Nilgiris, all hold lots of tiger and bison, and it is lovely country as well. Finally, the best spot of the lot—Travancore—at the very tail of them all. I think this is the very best spot I have ever been in for game, climate and scenery. The high range is anything up to 8,000 feet above the sea, with a cool breeze always blowing. The tops are great stretches of moorland, peat bog and bracken. The nullahs running up to them are dense tree forest where the game lies up in the day. If you are out on the tops in the morning you will see game as you never dreamt of it before, elephant, bison and sambhur, feeding out on the moorland as the red deer do at home.

Now enough of geography. I have tried to show you that wherever you are in India there is always sport in fairly easy reach. I will now try to give you an idea of how to set about fixing a shoot. I am not going to say much about Kashmir and hill shooting, partly because I haven't been shooting seriously there for some time, and conditions change there very rapidly, and secondly because your best way of making a start there is to write to a decent agent and get them to fix you up. It is a rotten way of doing things, and costly, but I do advise it for the first time until you have had a chance of looking round and learning the ropes for yourself. After you have done one trip there and been really bitten by it, you will know how to set about it yourself, and you will be able to cut adrift as you want to. Hill shooting is wonderful sport and takes you into the finest country in the world, but it has one great disadvantage. You are, and must be, very dependent on your shikari. Even the best men I know can't hope for much

success unless they have a first class shikari, and personally I like running the show myself, and standing or falling by my own knowledge and endeavour.

Now jungle shooting is very different in that way. In places like the U. P. for instance, there are no shikaris worth the name at all. You will want some sort of an *admi* to tie up for you and act as a sort of jemadar cooly, but that is all your shikari need be. The sport in jungle shooting is not the shooting of the beast. It lies in producing the beast to be shot. If you do that yourself you will love it. If you don't it will soon bore you stiff. So take my advice and from the start try to run the show yourself.

This isn't nearly so difficult as it sounds, if only one uses one's brains and is ready to profit by experience. I know that personally I started completely on my own, but from the very beginning I managed to achieve quite a reasonable amount of success. Anyhow, a tiger you get through your own efforts is worth half a dozen got in any other way, and if you persist in trying you will soon find you know far more about it than do those big noises who shoot their two or three hundred but let somebody else do the work.

The first difficulty is of course to know where to go for a shoot. Well, don't be led away by second hand tales of shooting in zemindari and that sort of country. There are good zemindari jungles, but there are precious few, and the best place to shoot is nearly always a good bit of Government Forest which is properly preserved and which cannot be over-shot. Find out, therefore, about a decent shooting district somewhere in reasonable distance, and write to the Forest Officer for one of the blocks in it. Remember—if you want to get a first class block you must write to the Forest Officer so that your letter gets to him three months to the day before your shoot is to begin. If you are even two or three days late you will find that the best blocks have gone. These Forest Officers are nearly all very helpful and courteous people, but remember that it is not part of their business to provide you with assistance or information. They will nearly always do so, but as an act of courtesy not of duty. Be polite to them, therefore, but remember that everything they do for you comes out of a busy man's time, so don't worry them more than you can help.

As soon as you have got your permit, write to the local Civil Official, the Deputy Commissioner or the Collector, and ask him very

kindly to warn his subordinates that you are coming into the district shooting and to ask them to give you assistance with regard to supplies, transport and baits. Some time before you arrive send one of your own men with a letter to the Tehsildar at your base giving exact details of what you require and the dates.

If possible go a day or two early and call on the local Civil Official and the Forest Officer personally. If you can manage that it is worth hours of letter writing.

If you are going after tiger you can economise in all things but one-baits for tying up. You must have lots of these, and you must have them in lots of time. Nothing is so maddening and so futile as having lots of tiger about and nothing to tie up for them. Baits (young buffaloes) are not too easy to get as a rule, and wherever you are going, it is nearly always worth while sending two or three men on at least a week ahead to buy them for you. You will want at least ten for a fortnight's shoot and often more. They are the most expensive item of your shoot, but they should not cost more than seven or eight rupees apiece. Try and get them concentrated in your jungle a day or so before you arrive.

I won't attempt to give you an elaborate list of stores and things you will want. Remember that most of the places that you will go to will produce practically nothing in the way of supplies. Even chickens and eggs will be have to be brought in from two or three marches away. You may get milk, but quite probably not. You must have chaguls for keeping your water cool, alum and chlorine for purifying it, and some simple drugs, quinine, aspirin, castor oil and the like.

Whatever you do, don't forget a surgical outfit. Antiseptic, say mercury perchloride and carbolic, a syringe for cleaning out wounds, a pair of forceps and dressings. You may get somebody bitten by a tiger and if you haven't got the proper stuff to treat him properly he will probably die and almost certainly lose a limb.

Now, having got into your jungle, what are you going to do about catching your tiger? Well, there are two normal methods of tiger catching, and you will generally have to use one or the other according to the nature of the country. Beating is one and sitting up is the other. Beating is the easiest and the most certain if the country suits and you can get the necessary men; so beat if you can.

Whether you are going to sit up or whether you are going to beat, there is one thing you must do first and that is to localise your tiger. You have got to tie him down to one locality, and you can only do that by getting him to kill, and lie up somewhere in the vicinity. Remember this, however. When you tie up for a beat, you want your tiger to lie up somewhere quite close to the kill. You tie up, in fact, at a place where he can drag the kill straight into lying up cover. When you tie up to sit up over the kill, you want to tie up where your tiger cannot drag into lying up cover, for if he does you will frighten him away when you come out to sit up.

People are always telling you that tigers in certain districts never come back to their kill. Don't you believe it. Nearly every tiger will come back to his kill if he thinks all is well and if he is quite undisturbed. What usually happens, however, is that when you arrive to sit up he is lying up somewhere near. He hears the noise and clears away, and has the sense to know that there is trouble about, and so, if he does come, he comes frightfully cautiously and generally spots you. Over and over again when you are coming out to sit up, you will hear, as you approach the kill, a khakur or a cheetul bark a couple of hundred yards away. You think they are barking at you. They are not. They are barking at the old tiger, who has heard you coming and is quietly slinking away. Well, you can't very well blame him if he is too cute to come back to his kill after that.

Remember that, of all the animals in the jungle, the tiger has much the best hearing. He will hear things that you think are utterly impossible. I have seen a nervous tiger stop and start at the sound of a leaf dropping 100 yards away.

But, with all these difficulties, one has a great advantage. In the hot weather a tiger practically must lie up close to or in water during the hottest part of the day. He will generally choose a shallow, muddy puddle under the shade of a rock or an overhanging branch. Therefore if you are trying to tie up for a beat tie up near shade and water. If you are tying up to sit up, tie up several hundred yards at least away from water. Then put up your machan and sit up in it in the hottest part of the day, sometime between 12 and 3. Never let anyone approach the kill in the morning, unless the vultures show signs of coming down on it. If they do that, get someone to go up quietly and cover the kill from sight.

About beating. The tiger is about the easiest animal in the world to beat, if you set about it the right way. He is easily moved, and has certain definite lines of travel, and he is quite easy to turn in a natural direction. He will nearly always make for high ground or hills, if there are any about, so always beat to the hills.

Although he follows the bed of a nullah at night and when hunting, he will not follow a nullah bed when beaten and will always stick to the ground above it. If your nullah has flat jungle on either side, with steep hills above that again, he will nearly always come along just at the bottom of the steep hill. If there is a low ridge or bank running along the length of the beat he will often come along the top of it so as to get a view, and if your nullah forks with a little ridge between the two branches, that is a likely place for a gun.

Remember there are several ways he may move, and where you haven't guns to cover them all, you must have stops. Good stops and plenty of them are much more important than beaters, and as a rule you will want twenty or thirty stops to 10 or 15 beaters. Stops should as a rule be silent until they see the tiger. If he is going forward they must not make a sound. If he is coming towards the side of the beat, all they have to do is to tap very gently on a branch and that will turn him at once. A noisy stop will scare a tiger and make him unmanageable, so that he will break back or through the side of the beat at a gallop. If he comes to the guns at all he will come too fast for accurate shooting and the guns will probably only wound him, and there will be a real mess up. The ideal beat is when the tiger is only moved, not driven, and when he comes to the guns at a walk without having seen the stops at all. Never force a tiger. The art in beating is to get a tiger on the move along the line he wants to go.

If you are cute you will often be able to run a little beat with only half a dozen men or so. There is one pet tree of mine from which I have shot three tigers in five beats. Each time I have beaten the place immediately after hearing of the kill with the 5 or 6 orderlies I have had in camp with me. Two I use as stops, where two paths go out at the side. The rest simply walk up the nullah talking towards me. Three times the tiger has walked quite unconcernedly up to my tree. Once he lay in an odd corner and got away up the hill side out of range, and on the other occasion he was not at home. This beat is about 300 yards long, and the widest strip of holding jungle is about 50 yards across.

One thing you must do, is to do your reconnaissances and lay out your beats before you get a kill. Reconnoitre your beat, put up your machans and work out all the details of your beat before you tie up at all. After you have reconnoitred each beat, then begin tying up for it. If you tie up first and reconnoitre afterwards, it's a million to a monkey that you put the tiger off when you come out to arrange the thing.

Don't try and put your guns too much in the open. A tiger will dodge the open, or gallop across it. It is easier to kill a walking tiger dead in fairly thick cover, than it is to hit a galloping one in the open. What you want are dead tigers not wounded ones. Don't fire at a tiger between you and the beaters unless you can kill him stone dead.

Remember that the first thing you want in a beat is to get your tiger on the move well ahead of the beaters. If the beaters practically tread on him, he will get flurried and start galloping about and then you can't control him. If you get him quietly on the move well ahead of the beat you can do what you like with him, for the stops can turn him quite easily, and he will give a much easier chance to the guns.

It is sound, therefore, where the beat is fairly long and cover is thick, for the beat to start with a hell of a noise and often a shot or two, so as to wake him up and get him on the move; after that, the more quietly the beat comes along the better.

All these principles apply equally to beating with elephants. You can run most beats on these lines with two or three elephants. You post the guns in trees in exactly the same way as you do for an ordinary beat, you want the same arrangements for stops, but you use your elephants to replace the coolies in the beat line. Never in the ordinary course of events try to beat a tiger up to a gun on an elephant. The elephant is bound to make a noise and the tiger will turn away from him.

And now comes the next point. Suppose your tiger does come to the guns and they have a shot at him, what next? It is, on the whole, unusual to drop a tiger in his tracks, even if you make a perfect shot. Hit through the heart he will generally gallop on and drop dead anything from 30 to 100 yards away. If it is thick, and you are not fairly experienced, you won't know whether he is dead or not.

Well, one thing I always advise you to do. During a beat always have a reliable man 70 or 100 yards behind you up a tree on the line a tiger is likely to go. His business is to sit perfectly quiet and watch what happens after you have fired. If the tiger is dead, he will be able to tell you. If he has cleared right off, again he can give you his line. Anyhow he will save you a lot of trouble.

Even if your tiger is said to be dead, be very careful about how you approach, for dead tigers have an awkward knack of coming to life again suddenly. I know of a case not very long ago where a Sapper and his wife shot a tiger one evening. They got down, went up to it, opened its mouth and looked at its teeth, then went back to camp. Next morning it had shifted about 300 yards away, and died all over again.

Take your glasses and see if he is breathing. Approach from the non-business end from behind a tree. Finally have some good big rocks thrown at him, and when two or three of these have hit him, then you can approach with safety. This applies equally to all dangerous game.

If a wounded tiger moves on, either out of sight or into cover, then the trouble begins. Don't be in a hurry to go after him. Set reliable men up trees to watch and listen in the direction he has gone, and sit down for an hour or so to let him die or stiffen.

Try to make out where he was hit, and the nature of his wound. If he was hit through the heart or lungs, he would blunder straight forward, crashing blindly through bushes and things, often chucking up a lot of blood from his mouth and nose. If hit through the heart he generally drops dead without making a noise. If a fatal lung shot, he often gives a lot of coughing roars as he gallops, and often as he dies.

A shot through the stomach only leaves blood for a short distance, and often a little fat. He may go for miles, and he may be able to fight three or four days later. If he is hit in the liver he generally goes some way, and then dies quietly. Again there is little or no blood, and both with a liver and a stomach wound, he often doesn't flinch or speak to the shot. A shot in the foreleg or breaking the bone below the shoulder brings him down on the spot, blundering and roaring on the ground. Give him another if you can if he does that. If you don't hand him another he will suddenly recover and

go off almost as though nothing was the matter with him. If you get up to him again, moreover, he will fight like hell, and the worst turns up I have had with tiger have been from a shot like this. A shot in the foot is the devil, both with tiger and panther, and though it doesn't impede their activity much, it usually makes them blind with rage. They often don't go far and when you get up to them they fight like hell. I very nearly got bitten by a panther which had been hit in the foot. A fellow I was out with had a shot at him over-night in a field outside the jungle. In the morning we went to see what had happened. We found a little blood leading off to the edge of the jungle at the bottom of a high bank. When I got to the bushes at the edge of the jungle, the beast leaped at me from about 15 feet up the bank, without sound or warning. I was rather taken aback, but managed to get him between the eyes in mid-air. I dodged him and he hit the ground stone dead. It was 19 feet from where he took off to where he hit the ground, and he took off about 15 feet above ground level. Some "lep," and his wound hadn't worried him much.

Remember the first thing you must do with a wounded beast is to locate him, and the second is to get round him so that he cannot get away or move without your knowing it. When you have done that you can take your time over shooting him. If he has an obvious line of retreat through fairly thick stuff, don't follow through it. Put men up trees to watch. Take one or two men and work along a high bank or somewhere outside the cover, till you find a more open bit. Work very carefully across it, putting men up trees, and stoning every bit of cover before you get to it. If no tracks lead out of it, get observers up trees all round it. Work it out with stones and so on till you move him. One of your men will probably be able to spot him or his exact whereabouts, and in time you will get him marked down so that you will eventually be able to get up a tree yourself where you can see to shoot him.

Never cross a nullah until you are quite certain the far bank is clear. Wounded tiger and panther will often cross a nullah and stop on the bank on the far side. Never approach them from downhill. Always from above. Work every bit of cover out as I said above, never going into it, always working round it, and gradually working it out until you are sure it is clear. Never approach any bit of cover

however small, till a reliable man has really looked into it from a tree, and till you have had it really properly stoned out.

Don't take a great crowd with you. Five or six reliable men whom you can trust and control are worth 50 who will get out of hand. Work in complete silence, you will nearly always locate him first by a sound—a growl—a groan or the birds making a noise at him.

The danger is not generally at the start. For the first half hour or so everybody is frightfully careful, and you can keep your men in order. As time goes on, however, and after three or four hours of it in the hot weather, everybody, including yourself, will get fed up and begin to take risks. That is when the accidents happen. You must absolutely steel yourself against getting slack, for the moment you do, your men will too, and one of them will get killed.

If you don't find him the first day, if he is badly wounded, he will have gone to water. If he hasn't he will be dead. So search all the likely water round, taking the same precautions.

If you lose him your responsibility does not end. You have let loose a terrible danger in the jungle for miles round. You must warn all the local inhabitants, the forest guards and anybody else whose business may take them into the forest. If you don't somebody quite unconnected with the show will get hurt, and that will be your fault.

I give you these three rules, which are the only possible basis or dealing with this business of tigers. Firstly: Never fire at a tiger unless you are practically certain of killing him dead. If you fire risky shots you are not only risking your own life, which is foolish, but other people's lives, which is criminal.

Secondly: If you do wound a tiger, it is up to you to take every possible step to kill it. Don't take unnecessary risks, but if it is humanly possible, you must kill it, otherwise some wretched villagers, who has nothing to do with the show will get killed while the tiger may turn man-eater. Thirdly: If you wound a tiger, it is up to you to hold the baby. In other words, if anybody gets bitten by it, it should be you, not one of your men. So don't let them take any risk that you wouldn't yourself. Above all things see that they do what you tell them, for it is no excuse for having a man killed to say that he didn't do what you told him.

Following a wounded tiger on foot is a very slow and very tiring business, but if you take these precautions there is no very great danger.

It should be possible, in nearly all jungles, to work the show so that you have 20 or 30 yards between you and any beast. If he charges from that distance you should be able to stop him. If you can't you have no right to be out shooting.

If you are charged by any animal, and if you shoot a lot, sooner or later you will be charged—don't be in too much hurry to shoot. Get your first barrel off fairly early. If it doesn't stop him, keep the second till he is quite close. It is a good deal easier to kill a beast at 15 feet than it is at 20 or 30 yards. I wouldn't let them come nearer than 10 or 12 feet if I were you, because even a dying tiger if it hits you may give you quite a nasty bite.

I am afraid I have harped rather on this business of tiger shooting, firstly because it appeals a lot to me, and secondly because I think to shoot a tiger is the ambition of most people who come out to this country. What I want to make clear to you is that it is not nearly so difficult as people think, even if one hasn't got the assistance of the local Rajah. Don't think tigers are scarce, because they are not. There is no great difficulty in two good guns getting three or four tigers in a fortnight in a decent block, even in these highly civilized days. Finally, about cost. I can't go into extensive details here, but remember this. Tiger shooting is by no means an expensive sport. On the whole, and when done on a small scale, I doubt if it is as expensive as small game shooting. Anyhow the cost is very much what you choose to make it.

There are two or three items which you cannot get away from. Firstly, your baits. You will want about 10 of these for a fortnight, and they should not cost you more than Rs. 80/- for the lot.

Transport is the next important item. The cost of it depends, of course, on two things. Firstly, the amount of kit you have got along with you, and, secondly, the distance you have to go from railhead. Bullock carts can go into most places you will want to shoot, and they will cost you three rupees per cart for a marching day and half that for non-marching days. You must be very luxurious if one bullock cart apiece does not suffice. In many places you will have to keep your carts permanently with you, for you can't get them in the jungle if you want to make a sudden move.

Taking cost as a whole, if you don't expect to drag beer and soda about with you, a bachelor will find that his all-in expenses from

railhead to railhead will be either a little less or very little more than his normal expenses in cantonments for the same period. What his transport and his baits cost him will be saved in club bills and in not being able to take his girl friend to the pictures.

The last serious shoot I was on was very efficiently run from the financial point of view (NOT by me). My share of everything from railhead to railhead was Rs. 176/-. We were three guns. We originally intended to be out for fifteen days, but we chucked it at the end of nine, having got five tigers, a panther and three or four stags. It would, as a matter of fact, have cost us very little more if we had stayed our full time, for a few extra days makes practically no difference to capital expenditure, and we could get transport when required locally. I would, however, like to emphasize the point that whisky was our only alcoholic drink—no beer or soda, and the financial side was being run by a fellow who knew the business absolutely inside out.

And now time is up. I must apologise if I have stuck too much to one branch only of my subject. I have done my best to suggest to those of you who haven't tried it, one way, at least, of making the best of this country. If I have only succeeded in persuading one or two of you to give it a try, our time will not have been wasted. I can only hope that if you do give it a try, and you do find a tiger, that some of the precautions I have suggested to you will put you in a more favourable position when it comes to deciding the major problem of who eats whom.

CO-OPERATION BETWEEN THE ARMY AND THE

R. A. F.

BY "MOULDY."

Introduction.

Attention has recently been directed to this subject by the issue of the new manual "The Employment of Air Forces with the Army in the Field" and by the Air Co-operation Exercise held at Army Headquarters last May. This article aims at amplifying certain points contained in the manual referring to reconnaissance; it is not concerned with the action of bombers and fighters.

The importance of a sound system of co-operation needs no emphasis, but it is equally important that all officers should have a working knowledge of that system. This is especially true in India, where aircraft often have to work with small columns and improvised staffs in minor operations on the North-West Frontier. Even more valuable than the theoretical knowledge of the system is a practical knowledge of how the other service works. This involves personal liaison between commanders and staffs concerned during operations, but it has also a wider implication—it is incumbent on all officers of both services at all times to get to know each other. Only in this way can we construct a really solid foundation on which to build up our system for war.

During the War, when the Royal Flying Corps was a part of the Army, all pilots had some knowledge, based on personal experience, of how the Army worked. With the creation of the Royal Air Force as a separate service, this ceased to be the case, and by degrees the number of pilots with Army experience decreased, until now there are few R. A. F. officers below the rank of squadron leader who have ever served in the Army. Even before the R. A. F. was created, it was found essential to have an intelligence officer in each squadron. This officer was originally provided from among the pilots in the squadron, but later an army officer was appointed for intelligence duties and for liaison between the squadron and the army formation in which it was serving. This officer, called the Branch Intelligence Officer, was the chrysalis from which emerged the present Intelligence Liaison Section.

Air Reconnaissance.

Reconnaissance is divided into strategical and tactical, the latter being sub-divided into medium, close and artillery. These terms are an indication of the kind of information which each form of reconnaissance aims at obtaining, and this is the distinction which should be borne in mind when deciding on the type of reconnaissance to be ordered.

Frequent confusion arises as to the difference between medium and close reconnaissance. The former is concerned mainly with the administrative and reserve area behind the enemy's battle position and is directed to obtaining information about location and movement of reserves, formation of dumps, activity at railheads, etc. Close reconnaissance requires a detailed examination of the enemy's battle area in order to obtain information of immediate tactical importance such as will affect the course of the battle within the period covered by the order, *i.e.*, the next 24 hours.

The normal method of communication between air and ground in tactical reconnaissance is W/T (two-way) for medium and R/T for close. It may often occur that close reconnaissance will be required to work beyond the range of R/T, and in this case it must be decided whether to use R/T and make the pilot fly back to within range in order to send his observations, or to use W/T instead. It must be remembered that, whereas R/T can be intercepted by listening sets allotted to subordinate formations such as forward brigades, W/T can only be received at the H/Q controlling the reconnaissance. These decisions should be made as a result of consultation between the R. A. F. commander and the General Staff.

In addition to strategical and tactical reconnaissance, there are photographic and night reconnaissances. These are often combined with other forms, particularly photographic with strategical and medium. Night reconnaissance may be employed when the enemy has adopted movement under cover of darkness to escape observation. The results which can be expected from night reconnaissance vary considerably with the state of the moon, and natural cover is very much more effective against air observation by night. It has been found, however, that pilots flying at 1,500 feet can see bodies of troops, even on roads lined with trees, when the moon is about half-full. The glowing ends of cigarettes and the lighting of matches show up very easily to an observer in the air.

Parachute flares exist at Home but not in India ; they can only illuminate a small area and are more suitable for searching definite points such as railway stations or cross-roads where enemy movement is known or expected to be in progress, than for reconnaissance over large areas in the hope of discovering an unlocated enemy force.

Pilots are trained to carry out all forms of reconnaissance for which the squadron to which they belong is used. This involves strategical, night and photographic reconnaissance for Day Bomber squadrons, and all forms of reconnaissance for Army Co-operation squadrons. In India, Day Bomber squadrons are also used for tactical (except artillery) reconnaissance on the North-West Frontier, and their pilots receive some training in medium and close reconnaissance as well.

Day Bomber squadrons are, however, handicapped in tactical reconnaissance since they are not fitted with R/T, nor equipped to pick up messages. It would be an advantage in frontier warfare if they could pick up messages, since it is often difficult to operate tactical reconnaissance with no means of communication from ground to air other than W/T pack sets in mobile operations.

Army Co-operation squadrons are organised and equipped for all forms of reconnaissance ; they possess R/T, W/T, message picking up gear, and one way W/T for artillery work. These squadrons have an establishment of twelve aircraft and can provide twelve sorties, each of about two hours, over the reconnaissance area, in a day. For limited periods this can be increased to eighteen sorties. Similarly, the period of two hours per sortie is governed by the fatigue of the pilot rather than the endurance of the aircraft, consequently, when flying conditions are good and enemy opposition is not serious, this period can be slightly extended, if need arises.

Allotment and control of squadrons.

The scale of allotment of squadrons is given in the manual, but their actual allocation by G. H. Q. to Corps, and by Corps to Divisions, depends on the situation and the requirements it involves.

As an example, we will suppose an expeditionary force of two Corps, each containing two Divisions, and having under G. H. Q. control two A. C. Wings, each of three squadrons. The employment of these squadrons at the outset of a campaign may be considered

in three phases—

- (a) before completion of concentration ;
- (b) after concentration and before contact ;
- (c) after contact has been gained.

First Phase.—From the moment war is declared the C.-in-C. will require information. This is obtained by Strategic Reconnaissance, which may be carried out by A. C. squadrons if distance and the air situation permit, but will otherwise be done by Day Bombers.

No ground formations have yet taken the field, consequently, no sub-allotment of squadrons is required and the whole R. A. F. contingent will be retained under G. H. Q. control.

Second Phase.—The opposing forces are now moving forward, G. H. Q. is necessarily getting left further back and control on the ground has to be decentralised to Corps. This will involve the need for aircraft under Corps control to give early information of the enemy's movements on the Corps front.

At this stage G. H. Q. will still be needing Strat./R. and may be using A. C. squadrons for this ; each Corps will require Med./R. on its own front, and quite possibly a considerable amount of photography of the area where the battle is expected to take place.

Probably G. H. Q. would allot to each Corps during this phase a Wing H. Q. and two squadrons, retaining two squadrons under the C.-in-C.'s control.

Third Phase.—When contact has been gained, further decentralization takes place on the ground ; Divisions are now really in control, and they in turn must delegate considerable responsibility to their leading brigades. Divisions must have early information of what concerns them intimately and must, therefore, have their own aircraft ; Corps will require a wider picture and G. H. Q. a wider one still. The first requirements during this phase are thus Strat/R. for G. H. Q. which will probably have to be done by D. B. squadrons, since A. C. squadrons will be fully employed on the remaining tasks, viz., Med/R. for Corps, probably Photo/R. as well, and Cl/R. for Divisions. Divisions may also require photographs, but at this stage it is best to co-ordinate all demands for photography through Corps H. Q.

A probable distribution of A. C. squadrons is now one to each Division and one under each Corps H. Q.

When the battle is in progress, advanced guards are deployed and artillery has come into action, Arty/R. will be required in addition to everything else ; Corps may require it for medium batteries engaged on C. B. work and Divisions will want it for their field brigades.

Some centralization has now taken place on the ground ; Divisions have assumed control from leading brigades and, as the battle further stabilises, Corps assume closer control over Divisions.

The reconnaissance requirements are now Strat/R. for G. H. Q. ; Med/R., Photo/R., and Arty/R., for Corps ; Cl/R., Arty/R., and probably Photo/R., for Divisions. At this stage it is quite likely that Corps will be unable to obtain its full requirements from one squadron ; in such cases it is easiest to replace all three squadrons directly under Corps (through the Wing H. Q.) and allot so many sorties for each task from each of two squadrons " on the front of " one Division apiece. The third squadron plus the balance of the other two remains available for the reconnaissance required by Corps.

Working for two formations at the same time entails a greater strain on the squadron commanders and I. L. sections, and no squadron must ever be ordered to work for more than two masters simultaneously.

The Intelligence Liaison Section.

Prior to the issue of " The Employment of Air Forces with the Army in the Field," there was no manual which contained a full explanation of the functions of I. L. sections. In this book, however, the matter is treated very fully and it is only necessary here to amplify one or two points.

(a) Instructions to pilots : When giving instructions to the pilot, the I. L. O. goes through with him on the map the " Tasks in Particular " laid down by the General Staff and together they work out the order in which the pilot will fly over the various places named. Two factors have to be considered, the order of priority of tasks and economy of flying time and the result is often a compromise between the two.

(b) The ordinary method of transmitting information to the Army is by means of a daily " Summary of Information." The

latest known situation of all bodies of troops which have been reported is shown on a tracing to fit over the map in use; the text of the Summary includes the deductions made by the I. L. section as to what has happened during the day and what is likely to happen next. It has been found on manoeuvres that the I. L. O., working in the comparatively peaceful atmosphere of the aerodrome, frequently arrives at a more correct appreciation of the situation than the staff at formation H. Q. who are constantly subject to interruption.

The Summary also contains a heading "Special Points," under which are included matters of particular interest such as the presence of A. F. Vs., negative information of any further bodies of the enemy believed to be in the area, location of refilling points, headquarters, and anti-aircraft batteries.

The S. A. O. makes up a tracing for R.A. staff showing the positions of all reported enemy artillery. This is called a "Hostile Battery Chart," and is accompanied by a "Hostile Battery Sheet" showing in tabular form how each battery was reported and what action has been taken, together with the S. A. O.'s deductions as to its nature and remarks on the success or otherwise of the shoot.

(c) The assistance afforded by the I. L. O. and S. A. O. to the squadron commander in training his pilots assumes greater importance in war than in peace, since young pilots will have had less preliminary training in Army matters. The I. L. O. and S. A. O. are expected to be able to teach pilots the elements of Army organisation and tactics, so that they will be capable of making reasonable deductions in the air as to where to look and what to expect to find there. Though pilots are not allowed to send down deductions in their messages, but report only exactly what they see, there is no reason why they should not make mental deductions on which to base their reconnaissance. This can only be done if the pilots have some familiarity with the enemy's organisation and tactical methods.

(d) From the Army point of view it is important to remember that the I. L. section cannot function properly in the instruction of pilots unless it is kept fully and constantly up-to-date with all the available information. It is suggested that the officer responsible for intelligence should ring up the I. L. O. 40 or 45 minutes before each sortie leaves the ground, and give him the latest information. This will then be passed on to the pilot, who reports to the I. L. O. half an hour before his sortie is due to start.

Staff Duties.

Reconnaissance of any kind necessitates the issue of full and clear orders if the maximum value is to be obtained from it; more especially is this so in the case of air reconnaissance when the greater range at which it is carried out enhances the importance of a good appreciation and sound forecasts of enemy movements and dispositions.

All that is required to be included in orders is clearly given in the manual, but there are one or two minor points which seem to cause confusion.

(a) The reconnaissance area should cover all the Tasks subsequently detailed. It is the area within which reconnaissance of a particular type may be expected to take place, not an area of which every nook and corner will necessarily have to be searched.

(b) A good deal of misconception seems to exist as to the distinction between "Task in General" and "Tasks in Particular." The former is to show the general purpose towards the attainment of which the day's reconnaissance should be directed, and it should cover all developments of the situation which can reasonably be anticipated. The "Tasks in Particular" serve to focus attention at the beginning of the day on those areas or lines of approach which the enemy is expected to use. These will naturally vary as the situation alters, and the tasks are, therefore, subject to change by the General Staff or, in default of their orders, the squadron commander concerned.

(c) Under the heading "Reports" only one time need be given. This should be the time by which information on the first task in particular is required. The pilot will, thereafter, report all he sees automatically and no other times should be laid down unless the receiving station on the ground is only able to open intermittently, in which case the times of opening and closing should, if possible, be stated.

Intercommunication.

The constant interchange of information which is required between the General Staff and the squadron working under it, without which full value cannot be obtained from air reconnaissance, necessitates the best possible communication between the H. Q. and the squadron. This should, whenever possible, take the form of telephone

and may involve the sacrifice of other important lines in the Divisional signal system. The amount of cable being strictly limited, it is often not possible to provide this link with the aerodrome in use. In such cases it may be possible to use an advanced landing ground nearer to the Divisional H. Q., and to which a telephone line can be laid. The I. L. O. will then work at this landing ground, to deal with the instruction and interrogation of pilots and the rapid transmission of information to the General Staff. The S. A. O. will remain at the main aerodrome to deal with photographs. Aircraft employed on close and medium reconnaissance will touch down at the advanced landing ground both on its way out on patrol and on its way home, and the pilot will report there to the I. L. O., but no aircraft nor ground installations will be permanently located there.

The ideal position for an advanced landing ground is close beside the Divisional H. Q., but this is rarely obtained and, particularly in India, it may be impossible to find one at all. When this is the case and distance precludes the use of telephones, recourse must be had to W/T.

The Army is responsible for the provision of this link with the aerodrome, while the R. A. F. provide all communications between aircraft in the air and formations or units on the ground.

Air Photography.

The Army has accepted the responsibility of reading, interpreting and annotating all air photographs demanded from the R. A. F. Annotation is the duty of the General Staff, but all officers should be able to read photographs and have some knowledge of interpretation. Reading means the ability to recognise natural features on a photograph; interpreting means recognising the marks made on the ground by troops as well as the troops themselves; annotating means marking on a print the results of interpretation, so that those unskilled in the latter can obtain full value from the information contained in the photograph.

Types of Air Photographs.

Photographs are of two types, vertical and oblique.

(a) Verticals are map-like. They are taken with the camera pointing straight down at the object and may take the form of pin-points. (i.e., single prints to show some particular spot) or mosaics

(*i.e.*, a series of overlapping prints covering a larger area and producing a picture like a map).

The camera must be so placed that the film is parallel to the mean level of the ground in order to avoid distortion due to the introduction of perspective. Even then only the actual centre of the print is exactly accurate, due to variation of scale in different parts of the print, especially when the ground is not level. Verticals are, however, accurate for bearing, *i.e.*, angles can be measured accurately on them, and they are sufficiently accurate for distance for tactical use.

Pairs of overlapping verticals viewed through a stereoscope show the relief of the ground features, that is—they show the ground as it actually appears to a man looking through the bottom of an aircraft.

(*b*) Obliques give a bird's eye view, or panorama. Since this introduces perspective, neither distance nor bearing are constant on any part of the print, nor can the north point be marked on them. They do show the shape of the ground and give some idea of where dead ground occurs.

They may take one of three forms, a pinpoint (*i.e.*, a single print of some particular object), a side-overlap (*i.e.*, a series of obliques taken to show a river bank or coast line), or a forward overlap (*i.e.*, a series of obliques taken to show successive views as they would appear to an aircraft flying up a valley or along a road).

Uses of Air Photographs.

(*a*) Topographical; either to supplement existing maps or in conjunction with Survey Companies, R.E. to produce new maps at a scale of 1/20,000. Various details can be obtained from photographs; the existence of tank obstacles, possible routes of advance for A. F. Vs. or other arms, probable areas in which the enemy may be concealed, some information regarding the condition of roads, depth of water in rivers, etc. In mountain warfare, they are extremely useful in working out picquetting. It is not suggested that the positions of all picquets can be selected in advance from photographs, but some idea can be obtained from them of the strength of picquetting troops likely to be required.

Again, when preparing a defensive position, if a commander is for some reason unable to go forward and examine the position from

the enemy's point of view, a series of overlapping obliques will give him a very good idea of how the position will appear to the enemy and which are its most vulnerable points. Obliques are often of great value to junior leaders in making their tactical plans and explaining these to their subordinates. Particularly is this so when the ground is devoid of obvious tactical features and vision is limited by hedges or standing crops.

(b) Reconnaissance.

i. Strategic reconnaissance aircraft depend almost entirely on the camera for recording information. Such matters of importance as new rail or road construction, new camps, collections of rolling stock, etc., are faithfully reproduced on the photographs.

ii. Medium and close reconnaissance areas, if photographed, will supply detailed information regarding trenches, machine gun emplacements, battery positions, wire, signal communications, etc. and, most important of all, tracks. These last are often the only clue in mobile warfare where no digging has been done; they appear at once on most kinds of ground and are clearly shown on photographs. Full value can only be obtained from such information when previous photographs of the same area are available for comparison.

Demanding Air Photographs.

The value of air photographs diminishes as time elapses between the demand being made and the photographs being received. Therefore, the Army must demand the minimum number of prints required, and must make their demands in such detail that the R. A. F. can give a 100 per cent. result the first time. The detail required is given in "The Employment of Air Forces with the Army in the Field," Chapter IV, Section 21.6. In addition to the points mentioned therein, in the case of side overlap obliques it is advisable to state clearly any particular part of the ground which must appear on them (*e.g.*, a river bank or coast line) and the line along which they should overlap, since the basis of these prints will never be one continuous line and the gaps between the lower halves of photographs may omit something which is of importance. When deciding on the number of prints required, it should be borne in mind that the average capacity of a squadron photographic section is 600 prints from 100 negatives per day, but this may be increased in emergency to 600 prints from 300 negatives.

Training.

The importance of a knowledge of air co-operation to all officers makes it essential to take every possible opportunity of training. There are certain "experts" available to assist in this, namely officers of the R. A. F.; at A. H. Q. the G. S. O. for Air Co-operation; and in each Command in India an I. L. section complete. These officers can help by lecturing, staging demonstrations of the work of I. L. sections, or advising on the air co-operation aspect of T. E. W. Ts. or exercises with troops, whether the R. A. F. is co-operating or not.

Local courses in air photography can be conducted by I. L. Os. and S. A. Os., and form a part of the syllabus for Command Intelligence courses.

For artillery co-operation, useful practice in the drill and communications can be obtained by both R. A. and R. A. F. from air shoots with 15-pdr. guns, and from exercises on Raikes or Coryton ranges and on picture targets.

No tactical exercise involving a force of an infantry brigade or more can be considered complete unless air co-operation is included, since in India it so frequently happens that aircraft do work with brigades in minor operations on the North-West Frontier.

Conclusion.

This article has aimed only at amplifying the manuals recently issued, in the hope that a more general interest in the subject may be aroused, and even that some of the readers of this Journal may be provoked to say either "This is not enough" or—far more likely—"This is too too much."

SOUR GRAPES OR THE "ELITE" *VERSUS* THE "UNEDUCATED MASSES."

BY F. S. C.

I like sour grapes. I am a disappointed man, and the iron has entered into my soul. I have failed to acquire the mystic and all powerful letters "P. S. C." after my name in the Army List. So, in my rage, I am going to be cantankerous and curse the whole system whereby officers in the army are taught how to be efficient officers in the army; and how they are not so taught. I repeat, I like sour grapes.

Some, indeed, have the luck—(*you* may say brains, industry, intelligence, efficiency, etc.—I still say "luck," though not necessarily "good luck") to pass into the Holy Places of Camberley or Quetta. The majority are taught "soldiering" (in a planned out, consecutive and uninterrupted course of study under expert instructors), only at Sandhurst and Woolwich at the age of 18, or at the Senior Officers' School at the age of, say, 40 or 45. During the intervening twenty or so years, the authorities "decentralise" (what a useful word!) and put the onus of teaching on to lower commanders to teach yet lower commanders; and, of course, the civilian crammers supply what "Authority" does not provide. In theory this is admirable; in practice often lamentable.

Some commanding officers know their jobs and can teach the mysteries of tactics brilliantly; are these commanding officers always equally as good at, say, law or administration? And if they are such brilliant super-men, is it not a pity that their knowledge and guidance is only disseminated among the few (at most thirty or so) officers in their own unit? And these would only get a complete course if they eschewed their leave and were never taken for a court-martial or other duty on the day of the most instructive *TEWT* or most interesting lecture.

Some commanding officers are not as good as others (They shouldn't be commanding officers, says "Authority." No, but they sometimes are). Most of the officers under them learn what they can by chance, some by industrious reading of F. S. R. and other uninspiringly written military bibles; a great many give up the contest and learn nothing. Units in some stations, *e.g.*, Bermuda, Hong

Kong and some places in India, can practice none of the doctrines preached by the most Napoleonic commanding officer.

And after all this, why should "Authority" interest itself in what junior regimental officers learn—still less how they learn it? There are lots of civilian crammers and surely there is always a supply of painstaking "p.s.c." professionals who run the show while the amateurs hunt, flirt, stick pigs, drink beer and hit polo balls.

(Now you see why I like sour grapes. I mean why I am proud of my title of "F. S. C." I am arguing backwards. All this should have been "para. I, sub-head (a)." The examiners were quite right, for without such orderliness of expression I "never would do for A or Q.").

But if the army had to expand and cope with a big war, it would need (somewhat suddenly) hundreds of brigade officers, R. T. O's., liaison officers, etc., as well as many good regimental officers capable of teaching civilians to fight. The true blue-blooded P. S. C. officer is far too rare a specimen to be wasted.

Moreover, would it not be rather a good thing if most of the officers in an army thought on the same lines, according to the same system, and had a common foundation of knowledge and principles? (A voice:—You would cramp all initiative, and tie people down to a set, stereotyped doctrine, "according to the book." I reply:—You might as well say that to be taught the laws of harmony or to take lessons in voice production makes musicians all compose the same tunes, or sing the same songs.)

I suggest that it might be useful to the Authorities to have among their voluminous statistics a list of officers who, though not among the aristocracy of militarism with "p.s.c." to their names, can at least be regarded as above the common herd: a respectable bourgeoisie in fact, which, like all bourgeoisies, will be snobbish enough to ape its betters.

At present one is either "p.s.c." or just nothing; a mere insect struggling after The Light, picking up a tag here, a phrase there, an idea from this colonel, a theory from that one; among herds of others struggling haphazard with greater or lesser degrees of interest or energy.

Why should not the normal Staff College course be reduced to a year or six months, and the entrants doubled or trebled? The

commandant and instructors should, after such a period, be able to select a few who were worth keeping on for a special second course of one year. This second year would really be a school for Napoleons ; a preparation for the Imperial Defence College. It might even be amalgamated with an enlarged Imperial Defence College.

From the students who had done both periods would come future G.S.Os. I, and other exalted prelates in the military hierarchy.

From the normal, one-year students would come brigade majors, staff captains, junior intelligence officers, some military attaches, and bottle washers of every sort. Also, incidentally, regimental officers who had received a sound methodical and consecutive grounding in tactics, administration, etc., based on a common doctrine by good teachers.

Without trespassing in the realms of fantasy, I believe this scheme, or one based on similar ideas, might even cause interest in soldiering to be a common feature among the "Uneducated Masses" instead of being the prerogative of the "Elite." By a wider dissemination of officers who had learnt something of Imperial and European problems, the narrowness and monotony of mess life and conversation might be relieved—but perhaps this is almost too Utopian to hope for.

In the days when I was foolish enough to spend my money on a civilian firm, to learn militarism for the Staff College examination, I was told to put headings:—"Introduction" "Conclusion" etc. in my essays. I didn't do it enough, it seems, anyhow I failed ; I have no "conclusion ;" the whole essay is an "introduction," and ends with a question.

What are the objections to these elastic and disgruntled ideas ? I hope the next number of this journal will be full of them, for this essay is written arrogantly and aggressively in order to elicit opinions on this subject from my elders and betters.

I know "Expense" will be the first objection. Of course it would cost money ; how, or why, or how much I don't know, but all changes and innovations for the better seem to cost prohibitive sums. My answer is:—We spend money on improving tanks, improving light automatics, improving aircraft, even improving uniforms—why not spend a little on improving officers ?

TWO LECTURES ON THE MESOPOTAMIA CAMPAIGN.

6TH NOVEMBER, 1914, TO CAPTURE OF KUT-AL-AMARA ON
29TH SEPTEMBER, 1915.

BY MAJOR J. E. SHEARER, M.C., 15TH PUNJAB REGIMENT.

1. *Scope of lecture.*

I can only give you a brief outline of this campaign in these two lectures, so I shall spend as much time as I can on making the campaign as alive and interesting as I can for those of you who have not been in Mesopotamia by telling you as much as I can in the time available about local conditions, and in endeavouring to point out the main lessons of this campaign. I shall give you a sufficiently full outline of the narrative of the campaign to give you the pegs upon which to hang your more detailed reading, but I shall keep this outline as short and as simple as possible.

For your reading I would recommend that the Staff College "Critical Study of the Campaign in Mesopotamia" up to April 1917, should first be read, and that then you should read the Official History, Volume I, to fill in the necessary details. If you try to wade through the Official History without first getting a clear picture in your mind of the essentials of the campaign, you will only get hopelessly fogged. The Official History contains a mass of very interesting detail, but it makes no criticisms and does not try to point out any lessons and so is only suitable for the more advanced study of the campaign.

The "Critical Study" is a book "for official use only" and cannot be purchased; but copies of it have been issued by A. H. Q., India, to all military libraries and to all officers' messes.

2. *General Description of Mesopotamia.*

Mesopotamia, (or Iraq, as it is now generally called), is entirely different to any other country I have ever seen. I have heard it aptly described as "a river, with belts of palm trees on each bank, and then miles and miles of damn all." But the "Tommy" who invented that description used a much stronger expression than "damn all," and he did not realize that even the palm trees fade out about 100 miles above Basra; so the maps with which I was myself issued when I first landed in Mesopotamia were not of much military value. They showed the Tigris beautifully printed in blue, but the rest of the map was more or less blank.

Unless you have seen the country it is difficult to realize the absolute flatness and "nothingness" of the landscape. So you can see that with no features at all upon which to take compass bearings, or by which the troops could recognize their objectives, it was unbelievably difficult to write clear orders or to maintain direction in our attacks.

3. *Mirage and Dust.*

These difficulties were greatly increased by mirage and dust. Mirage habitually distorted everything, so that even after months of experience it was impossible to trust one's own eyes. Large lakes were seen where no water existed at all: a single camp flag would look like a galloping Arab: a flock of ration sheep a few hundred yards distance would look like a charge of mounted Arabs with their cloaks flapping in the wind: and most strange of all, an untidily-dug trench parapet 18 inches high would look at 300 yards range like a range of sand-hills; while sometimes the mirage would entirely hide a real cavalry squadron at a few hundred yards range. Field glasses only accentuated the distortion of the mirage. So you can understand the unhappy position of Commanders and Gunners trying to carry out a personal reconnaissance or observe from their O. P's.

In the dry season these difficulties were accentuated by dust. Dust devils were everywhere blotting out the landscape, and the dust raised by the strike of bullets was so thick that infantry advancing under accurate enemy small arms fire could only see about 50 yards and so were virtually fighting under night conditions.

4. *Mud and flooded Areas.*

During the hot weather the Tigris and Euphrates are so low and full of sand-banks that navigation becomes slow and difficult; but during the cold weather the rivers come down in tremendous floods which, if uncontrolled, would inundate the whole country. In fact Lower Mesopotamia is merely a huge river delta built up by the flood-mud of centuries. These floods are controlled to a certain extent by large earthen "bunds" along both banks of the Tigris, but the result is that the Tigris becomes a raging torrent with a 5-knot current flowing well above the level of the surrounding country. So any break in these "bunds" floods a very large area of country, often at very short notice.

In addition to these "casual" marshes there are also enormous permanent marshes, all too shallow and too full of reeds for navigation, in Southern Mesopotamia (*vide* Sketch Map No. 1). Consequently many of the attacks in this campaign had to be carried out in Arab canoes, called "Bellums."

The mud round these marshes and inundations is peculiarly tenacious; and during the cold weather sudden, very heavy rain storms are also frequent. These render the whole country impassable for wheels in a few hours and reduce infantry movement to about one mile an hour with great exertion.

So you will see that mud, often quite unexpectedly, was of great tactical importance during the cold weather.

5. *Drinking Water.*

In spite of all this water lying about there is practically no drinkable water anywhere except in the main rivers. The water in all the permanent marshes, as well as in most of the winter inundations, is too strongly impregnated with Epsom salts to be fit for drinking either by man or animals.

So operations had necessarily to follow the main rivers, and our attacks had to be frontal ones, as lack of drinking water made wide turning movements impossible.

6. *Climate.*

Mesopotamia is a country of extremes. The heat in summer is intense, going up to 130°F. in the daytime, but dropping as much as 60°F. at night. During the summer the flies and mosquitoes are unbelievably numerous, spreading disease broadcast, for no man or animal was ever really free from diarrhoea on account of the Epsom salts in the water.

North of Amara the heat is a dry one and so is easier to bear, but in the marshy areas further south the heat is a damp one and so is very trying indeed.

The winters are beautifully cool in the daytime, but with heavy frost at night north of Qurna. But in the winters our troops had to contend with frequent rain and sleet storms and with the mud and floods to which I have already referred. So we all agreed out there during the War with the Arab saying "When Allah made hell, he found that it was not bad enough. So he made Iraq—and added flies."

7. *Communications.* (See Map No. 1.)

As I have already said, Lower Mesopotamia has been made by layer upon layer of mud left by centuries of floods, so there are no stones at all there. Consequently, there are no metalled roads. In the dry season this mud gives a hard, springy surface where wheels can move anywhere; but as soon as it rains, wheels stick in the mud. Consequently, unmetalled roads would be useless and also do not exist. These facts combined with the shortage of drinking water, necessarily mean that the rivers are the only main communication routes in the country.

There are five main rivers in the area covered by this lecture. These are the Tigris and Euphrates, which join in two places, at Qurna and at Kurmat Ali. From the latter place to the sea their combined waters are called the Shatt-al-Arab. (Incidentally, Qurna is supposed to be the original Garden of Eden, and possesses the largest mosquitoes I have ever seen.)

The Karun flows from Persian Arabistan into the Shatt-al-Arab at Mohammareh. Near the junction is Abadan Island where are situated the Anglo-Persian Oil Company's refineries and shipping wharves. The oil wells are at Maidan-i-Naftun in Persia, and the oil comes 150 miles by pipe-line through Ahwaz and down the Karun river route to Abadan Island. The bulk of the oil supply for our Navy at that time came from this source, so the protection of this pipe-line was of the utmost importance to us.

The fifth strategically important waterway is the Shatt-al-Hai, which flows from the Tigris at Kut-al-Amara into the Euphrates at Nasiriya. This is not really a river at all but a natural overflow from the Tigris. Its water can be controlled at Kut-al-Amara, so it provided a useful line of advance for the Turks upon Basra, but would have been a dangerous route for us northwards from Nasiriya before we had captured Kut-al-Amara.

8. *Land Transport.*

[When Indian Expeditionary Force "D" first landed in Mesopotamia their transport was on the ordinary Indian organization of pack mules and A. T. carts for 1st Line Transport and camels for 2nd Line Transport. The area of the original operations was too wet to be suitable for camels, while no local grazing at all existed for them. So they were soon almost all returned to India as useless mouths to

feed. Our supply problem was always difficult, as practically no local supplies except dates were obtainable, and even our firewood had to be brought from India. Date palms will not burn and there are no other trees in the country.

After the return of the camels, our 2nd Line Transport consisted entirely of local Arab sailing-ships, called "Mahailahs." These can sail but more often had to be towed slowly and laboriously against the current by their crews.

So, even had water carts been provided, none of which existed with I. E. F. "D" at that time, our troops could leave the vicinity of the large rivers only with 1st Line Transport. Thus wide turning movements were out of the question, and our troops were always committed to frontal attacks, and any pursuit of the defeated Turks was always impossible except in river-craft.

9. River Transport.

As you will see when you read the details of this campaign, the supply and transport problem was always the rock upon which "G" plans crashed.

Ocean-going ships of limited draft could reach our base at Basra, but the process of unloading them there was appallingly slow. Up to 1918, when modern wharves and appliances had been built, it was quite normal for a ship to take 39 days to unload at Basra.

Once ashore, troops and stores had to be sent up-river in shallow-draught river steamers and lighters. Each steamer had a lighter lashed to each side of it. This clumsy arrangement made movement slow against the strong current in the flood season, and slower still when the rivers were low and full of sand-banks; but it was the only possible way of carrying the necessary tonnage with the inadequate number of river steamers available. There were no railways south of Baghdad until the end of 1916, nor were sufficient river steamers available until that same date. The General Staff were unaccountably "slow off the mark" in asking for more river steamers and for a railway. The latter was at first refused by the Finance Department of the Government of India as an economy measure; and suitable river steamers took many months to build and send to Mesopotamia, and 20 of them sank at sea *en-route*.

I shall give you more details on this subject later.

✓ The Turkish supply problem was an easier one than ours. They floated men and stores downstream in rafts which were broken up at their destination and used as firewood.

10. *Ordnance and Medical Services.*

✓ India had been "bled white" for both Ordnance Stores and Medical Services for France and East Africa, so I. E. F. "D" came off particularly badly in both these respects.

✓ Our artillery was a heterogeneous collection of obsolescent pieces, and gun ammunition was short.

✓ The medical officers did their best, but our casualties were far in excess of anticipation; while the proportion of wounded to killed was unusually high, as the dead flatness of the ground enabled the Turkish small arm fire to cause us appreciable casualties at ranges up to 2,000 yards. So our medical services could not cope with the large numbers of wounded who suffered horribly in consequence.

11. *Arabs.*

The Arabs were a constant thorn in the flesh of both sides. They were treacherous to a degree and fiendishly cruel to the wounded, whom they always brutally mutilated whenever they got the chance. In every fight a swarm of Arabs could be seen hovering round the flanks, ready to dash in and cut up the wounded and stragglers of both sides whenever they got a chance. The Turks often used Arabs as allies, but that did not prevent their Arab auxiliaries from harrying their Turkish "friends" in a retreat.

So every plan of attack had to be complicated by arrangements to protect the flanks and rear of the fighting troops from Arab marauders.

12. *Objects of the Campaign.*

I cannot give much time to the confusing and complicated question of the objects of this campaign; but I shall give you a brief resumé of this question now, in order to clear your minds about it, and I shall refer again to it from time to time during this lecture.

[a] In October 1914 the expedition was originally ordered by the Imperial Government against the wishes of the Government of India, with the main object of safeguarding our naval oil supply from the Anglo-Persian Oil Company.

There were also subsidiary objects such as impressing the Turks, Arabs, Egyptians and Persians that we were fully capable of checkmating their intrigues against us.

(b) By April 1915 our easy initial successes encouraged the Government of India to extend our hold on the country. General Nixon, the Force Commander, was then instructed :—

Firstly, to retain complete control of lower Mesopotamia.

Secondly, as far as was compatible with the first role, to safeguard the oilfields, pipe-line and refineries of the A. P. O. C.

Thirdly, to submit plans for :—

- (i) The effective occupation of the whole of the Basra Vilayet, which included Amara and Nasiriya and,
- (ii) for a subsequent advance on Baghdad.

Thus we see that the safeguarding of the oil fields was gradually sinking in importance in the minds of the Government of India ; but that that object remained the main object of the Imperial Government's policy in Mesopotamia.

(c) After much correspondence between the Government of India and the Secretary of State, the Imperial Government grudgingly sanctioned first the advance to Amara and Nasiriya ; then the advance to Kut-al-Amara in order to deny the use of the Hai to the Turks for an attack on Nasiriya ; and finally in November 1915 they agreed to send two Indian Divisions from France and sanctioned the disastrous advance on Baghdad which resulted in the seige of Kut-al-Amara and was responsible for all our troubles in Mesopotamia in 1916.]

(d) The Government of India, on the advice of General Nixon, but against the wiser protests of General Townshend, seem to have been lured into an unwise extension of their objective without adequate troops and with extremely inadequate maintenance transport. Our successes up to the capture of Kut-al-Amara in October 1915 were gained against comparatively weak and indifferent quality Turkish Arabian troops, with only a small leavening of real Anatolian Turks ; but from that time onwards reinforcements eventually totalling 60,000 first-rate Anatolian troops from Gallipoli had to be fought. When advising the advance on Baghdad General Nixon did not believe our intelligence reports

about 30,000 anatolian reinforcements being already close at hand ; but, even so, he seems consistently to have appreciated the situation from the " G " point of view alone and to have ignored the " Q " difficulties.

(e) The big lesson we can learn from this unfortunate controversy is, therefore, that in undeveloped countries, " Q " problems must be given full weight, otherwise maintenance is almost bound to break down and the best laid ' G ' plans will fail. " Q " must not be allowed to dominate " G " or plans will become unnecessarily " sticky " ; but " G " and " Q " must work together, each being given their fair share of the balance.

This lesson is just as true of operations on the N.-W. Frontier of India as it was in Mesopotamia in 1915.

13. *Division of the Campaign into Phases.*

[This campaign falls into six main phases.

These are :—

- (i) The occupation of Basra and the capture of Qurna.
- (ii) The Turkish attempt to recapture Basra.
- (iii) Operations in Arabistan to reopen the oil pipe-line about Ahwaz.
- (iv) The capture of Amara.
- (v) The capture of Nasiriya.
- (vi) The capture of Kut-al-Amara.]

I shall run through each of these phases briefly, going only sufficiently into detail to give you a connected narrative and to bring out the main lessons of each battle.

14. *Phase (i).—The occupation of Basra and capture of Qurna.*

(a) *Landing at Fao.*

On 6th November, 1914, the leading elements of Indian Expeditionary Force " D," (the 16th Indian Infantry Brigade under Brigadier-General Delamain), landed at Fao and captured the obsolete fort there practically without opposition, war with Turkey having been declared the previous day.

The only importance of Fao, which is situated at the mouth of the Shatt-al-Arab, is that it was the head of our telegraph cable for India.

(b) *Landing at Sanniya.*

On 7th November the Fao landing party re-embarked and General Delamain's whole flotilla moved up-river and spent the 8th to 10th November disembarking without opposition at Sanniya on the right bank of the Shatt-al-Arab two miles above the oil refineries on Abadan Island.

General Delamain's original intention was to advance to attack the Turkish force which was concentrated a few miles further up-stream ; but he changed his mind when he got news of an impending Turkish counter-attack. He was greatly outnumbered and out-gunned by the Turks, and his wireless broke down and prevented him getting any news at all about the remainder of the 6th (Poona) Division's probable date of arrival ; so he stayed where he was in a perimeter camp. I want you to note the perimeter camp, as I shall point a moral from that later.

The Turkish counter-attack duly materialized on the 11th November and was beaten off after some difficult fighting in the thick date plantations ; but General Delamain did not follow up his success, partly because he was informed of a further impending counter-attack by 10 Turkish battalions, but principally because heavy rain on the 12th and 13th made the ground impassable because of mud. You will remember my previous remarks about the tactical influence of mud in Mesopotamia.

(c) *Landing of G. O. C., 6th (Poona) Division and 18th Indian Infantry Brigade.*

On 14th November General Barrett, the G.O.C., 6th Poona Division, arrived and assumed command. He had with him the 18th Indian Infantry Brigade and some guns ; but this reinforcement did not complete its disembarkation until the 17th November owing to the strong current and entire lack of proper landing facilities.

The same day General Barrett received orders from India that his objective was now Basra, which he was to capture as soon as he felt strong enough. He was also informed that the remainder of his Division would embark at Bombay on the 19th November.

This latter reinforcement could not arrive in the Shatt-al-Arab until about 28th November, but, although greatly outnumbered by the enemy, General Barrett decided to attack forthwith, as he knew that the attitude of the local Arabs and the safety of the Oil Refineries depended upon his rapid success.]

(d) *Action at Saihan.*

✓ On 15th November the 16th Indian Infantry Brigade successfully drove in the enemy's advanced troops at Saihan in order to cover the disembarkation of the 18th Indian Infantry Brigade and attached troops.

(e) *Battle of Sahil.*

✓ On 17th November the 16th and 18th Indian Infantry Brigades defeated the enemy's main force at the battle of Sahil after a hard fought battle.

The plan of attack was, roughly, to attack the enemy's open right flank and drive them towards the river bank where they would be dealt with by our ship's guns. But this plan had to be entirely altered during the course of the battle because it was found that the shallow water and the thick date groves on the river bank prevented the ship's guns from seeing their targets, and because the enemy's very well-concealed trenches extended so far inland that their outer flank would have been difficult to turn.

✓ Soon after the advance commenced, a sudden, heavy rainstorm converted the whole battle-field into a quagmire in which our cavalry could not move out of a walk and our guns could scarcely move at all. ✓ This was followed by a heavy mirage and finally by a dust storm, both of which so blinded our artillery O. P's. that the enemy were enabled to retreat from their positions in daylight and were able to take away guns which they had abandoned earlier in the day.

✓ General Barrett did not use his cavalry to exploit his success on account of the heavy mud. So the Turks were able to retreat with much less loss and demoralization than would otherwise have been the case. The Mesopotamian climate had greatly handicapped the attacking force, as was usually the case.

(f) *Lessons of the Battle of Sahil.*

(i) *Orders looking too far ahead.*—This battle illustrates the unsoundness of issuing detailed attack orders without previous adequate reconnaissance of the enemy's dispositions. The original orders contemplated turning the enemy's right, but this was found to be impracticable, and entirely different orders had to be issued during the battle. This caused great difficulty in co-ordinating the final assault.

Would it not have been sounder to have issued orders only for an advance in a concentrated formation, with the cavalry well ahead,

searching for information about the enemy ? This would have avoided wasting time and men by attacking the enemy's wrong flank first ; and it would have given General Barrett a stronger force with which to give a decisive knock-out blow at the vital point of the enemy's position.

(ii) *Use of Cavalry.*—The Divisional cavalry regiment was used to cover the outer flank of General Barrett's force during the advance. Was this sounder than giving them the reconnaissance rôle suggested above ? The official history does not help us on this point ; but there would certainly have been a swarm of mounted Arabs hanging about like jackals wide round our flank, waiting to pounce upon our wounded. So some sort of mobile flank protection was imperative.

Probably it would have been sounder to have used the bulk of our cavalry regiment for the reconnaissance upon which to issue detailed attack orders, leaving the flank protection to be provided by infantry, with the addition of one or two troops of cavalry only.

(iii) *Exploitation of Success.*—Subsequent events proved that the enemy were at this stage of poor quality, so a vigorous pursuit by our cavalry would probably have had an immediate decisive effect. The mud and mirage stopped this ; but nevertheless, we should always remember to use our cavalry in rôles where they can get the maximum advantage from their mobility. This principle was consistently forgotten throughout the first three years of the Mesopotamia campaign.

(iv) *Use of Engineers and Pioneers.*—Both the companies of sappers and miners with the force were used in the firing line as infantry and suffered heavy casualties. This was an obvious mistake, because engineer casualties take many months to replace. There was no lack of urgent legitimate engineer work at the time, as the force was being maintained only with great difficulty on account of lack of proper landing piers, etc.

The Pioneer battalion was also used as infantry, although it was kept in reserve and presumably did not lose many men ; but the same principles apply to their use as for Engineers.

You will find that sappers and miners and pioneers were consistently used as infantry in every battle of the period covered by this lecture.

(g) *Occupation of Basra.*

✓ On 22nd November Basra was occupied without further opposition, the Turks having retreated to Qurna, at the junction of the old bed of the Euphrates with the Tigris.

(h) *Capture of Qurna and consolidation of Basra.*

✓ After certain naval reconnaissances of the Turkish position at Qurna had been carried out, General Barrett decided to capture that place in order to consolidate his hold on Basra.

Consequently, on 3rd December a small mixed force consisting of one Indian battalion of the 16th Indian Infantry Brigade, one Indian battalion and one British infantry company of the 18th Indian Infantry Brigade and one field battery was despatched up-river in steamers, escorted by 3 naval sloops and 3 armed launches. You will observe the strange breaking of organization (*i.e.*, two battalions from two different brigades, commanded by a senior C. O. with no additional staff. Similar breaking of organisation was frequent throughout the whole campaign.)

[This small force failed to capture Qurna, but remained in observation on the opposite bank of the Tigris until reinforced on the 6th December by the remainder of the 18th Indian Infantry Brigade. After stiff fighting on the following day, the Turks were dislodged from the left bank of the Tigris and a flying bridge was put across the Tigris on the 8th December. On the 9th December the Turkish commander surrendered with 1,000 men and 7 guns.] This made Basra and the oil refineries secure for the time being, although it is evident that General Barrett had already appreciated that an eventual advance to Amara and Nasiriya would be necessary before Basra and the oil fields could be considered properly secure. He also sent out a "feeler" to the Government of India to ascertain their views regarding a rapid advance to Baghdad, which he and his political adviser considered could easily be captured at that time owing to the low morale of the Turkish troops. They considered that the early capture of Baghdad was advisable as it would have a steadying effect upon the powerful Arab tribes between Basra and Baghdad.

(i) *Transport situation with regard to an advance on Baghdad.*

It seems strange, however, that, in making the above suggestion, General Barrett should not have strongly pointed out the transportation difficulties, which by then were already acute.

The remainder of the 6th (Poona) Division had landed at Basra by the end of the first week in December 1914, so from the 'G' point of view General Barrett's troops were ample for the advance to Baghdad. So far, at comparatively small cost, his two leading infantry brigades had attained his original objectives, had destroyed most of the 38th Turkish Division and had captured 1,200 prisoners and 21 guns. But the 'Q' situation was "parlous" in the extreme. The 6th Division was immobile by land, as practically all its 2nd Line Transport camels had been returned to India, as I have already told you.

The river transport situation was little better. It consisted only of 3 river steamers and 17 lighters, (*i.e.*, sufficient to carry two infantry battalions with supplies for one week). On 23rd November a R. I. M. officer with the force had recommended the immediate order of 12 more river steamers; but this was not considered to be urgent and the proposal was dropped by Force Headquarters, in spite of the fact that transport was already insufficient to maintain detachments at Amara and Nasiriya had those places been occupied then. So a rapid advance to Baghdad was palpably impossible at that time from the maintenance point of view.

[In January 1915 General Barrett modified his former decision and asked for 7 more steamers and 2 more lighters. These were supplied by the Government of India in May 1915; but by June 1915 the Tigris had become so shallow that most of the new steamers could not ply above Qurna. Therefore it became impossible to carry out simultaneous operations on the Tigris, Euphrates and Karun as the same shallow-draught steamers had to be used in turn in each of those theatres of operation.]

[Consequently in July 1915 Force Headquarters demanded still more shallow-draught steamers and lighters, but such difficulties were encountered in supplying these and sending them to Mesopotamia that it was not until June 1916, that sufficient river transport had arrived in the country to have made the capture of Baghdad a really practical proposition from the 'Q' point of view.]

15. *Phase (ii)—Turkish attempt to recapture Basra, December 1914 to April 1915.*

(a) *Turkish Dispositions, December 1914 to February 1915.*

During the early part of this period the main Turkish Force was opposite Qurna. During January disquieting information was

received that the Turks had sent some regular cavalry and infantry to Ahwaz and had raised the Arabs there against us by the proclamation of a "*Jihad*", and that the oil pipe-line had been cut in the Ahwaz region.

Further disquieting reports were also received that four Turkish Divisions, two of which were first class fighting ones composed of Anatolian Turks, were being drafted to Mesopotamia to recapture Basra. This report later proved to be an exaggeration; but the 35th Turkish Division actually did move down *via* Baghdad and Nasiriya to Barjisiya wood, some 6 miles west of Shaiba. This advance was carried out deliberately, a chain of supply depots being formed by the Turks as they advanced.

Up to the middle of February a Turkish attack was expected on Qurna, but by that date the floods began to make their appearance and soon rendered Qurna safe from attack.

(b) *British dispositions and reinforcements, December 1914 to February 1915.*

Up to January 1915 the bulk of the British Force was at Qurna and Basra with a small detachment at Shaiba. In January the Government of India sent an additional Indian infantry brigade (the 12th) from India, and in February two Indian cavalry regiments and a horse battery arrived to form the nucleus of the 6th Cavalry Brigade; but the original cavalry regiment remained as divisional cavalry and did not join this new cavalry brigade.

The situation on the Karun had become so serious before the arrival of these reinforcements that General Barrett sent a detachment of one Indian battalion of the 18th Infantry Brigade to Ahwaz in January, and later reinforced it by one Indian battalion of the 12th Brigade, 30 rifles of the Dorsets from the 16th Brigade and one section of mountain artillery.

Doubtless General Barrett had very good reason for making this detachment from three brigades instead of from one brigade under its own brigadier and staff, but this heterogeneous detachment suffered severe reverses and had very soon to be reinforced. This is yet another example of the tendency to which I have already referred of always making "scratch" detachments in this campaign, instead of detaching complete formations under their own commander with his own staff to assist him.

(c) British Dispositions, March 1915.

In March 1915 General Barrett was informed that two more infantry brigades would be sent to Mesopotamia in the near future. He then reinforced the Ahwaz detachment by the 12th Infantry Brigade, $\frac{1}{2}$ squadron of cavalry and a field battery (less one section), and leaving only one infantry brigade (17th) in the area Qurna—Kurnat Ali, concentrated the remainder of his troops in the area Basra—Shaiba in order to meet the Turkish threat on the latter place. By this time I. E. F. 'D' totalled 13,500 rifles, 900 sabres and 40 guns.

(d) Formation of I. E. F., "D" into an Army Corps under General Nixon, in April 1915.

On 9th April 1915, General Nixon landed at Basra and assumed command of I. E. F. "D." The 30th and 33rd Indian Infantry Brigades also arrived as reinforcements. The Force was then organized into an Army Corps of the 6th and 12th Divisions. But the 12th Division was in reality little more than a reinforcement of infantry. The divisional artillery consisted only of one Territorial field battery and two immobile batteries of heavy artillery; while there were no other divisional troops except signals and two companies of sappers and miners. There was no divisional medical organization at all for the 12th Division. So the 6th and 12th Divisions could not operate together as they had to borrow each other's divisional troops for any major operations.

(e) Situation at Shaiba at the beginning of April 1915.

By the beginning of April the situation around Basra became acute. A Turkish force of about 6,500 regular troops and 11,000 to 18,000 Arab auxiliaries was steadily approaching Basra from the direction of Nasiriya and Shaiba. Our Intelligence Service had kept General Barrett well informed of this movement, but had exaggerated the strength of the Turks.

The British forces were at that time distributed as follows :—

(i) At Shaiba, in an entrenched and wired perimeter camp :—

16th Ind. Inf. Bde.

18th Ind. Inf. Bde. (less one Bn. at Ahwaz).

One Bn. 17th Ind. Inf. Bde.

Div. Tps. 6th Division, (less Dets. at Qurna and Ahwaz).

6th Cav. Bde. (less $\frac{1}{2}$ Sqn. at Ahwaz).

(ii) *At Qurna and Kurmat Ali :—*

17th Ind. Inf. Bde. (less one Bn. at Shaiba).

(iii) *At Ahwaz.*

12th Ind. Inf. Bde.

One Bn. 18th Ind. Inf. Bde.

$\frac{1}{2}$ Sqn. Cav.

and a few guns and sappers and miners.

(iv) *In process of disembarking at Basra, or en-route there.*

30th and 33rd Ind. Inf. Bdes.

So, quite unavoidably, only a little more than 1/3rd of the total British force was available to meet the Turkish attack on Shaiba. This shows the good Turkish strategy of demonstrating at Ahwaz and Qurna while their main attack was developing towards Shaiba and Basra.

(f) *Topography of Shaiba Area.* (Vide Sketch Map No. 2).

Shaiba lies about 9 miles S. W. of Basra, and the ground between those two places was entirely flooded at this time. The only ways by which our troops could cross that flooded area were in "bellums" (native canoes) direct from Basra to Shaiba (9 miles by water), or by wading for 6 miles towards Zubair and then moving a further 4 miles northwards to Shaiba along the edge of the flooded area. Reinforcements from Basra could not therefore arrive quickly.

Our perimeter camp at Shaiba was defended by a wire fence and a single row of strong points linked up by fire trenches. It had no depth at all with which to meet a determined attack.

The final Turkish camp was at Barjisiya Wood and their L. of C. ran from there through Shwaibda and Nukhaila close to the western edge of the flooded area.

From Shaiba the ground rose steadily to the line of South Mound, about half way between Shaiba and Barjisiya Wood. There is another low ridge running N.N.W. from the Watch Tower. Beyond this latter ridge the ground falls away in a gentle glaciis slope to Barjisiya Wood. As you will see later, the Turks made full use of this reverse slope when we attacked Barjisiya Wood.

Finally, you will see that the high ground which I have just mentioned makes a big bight into the edge of the flooded area.

The topography of the whole of this area was well known to our Cavalry Brigade before the battle.

✓(g) *Narrative of Battle of Shaiba, 12th to 14th April.*

(i) *11th April.*—During the night of 10th/11th April the Turks ✓
reached Barjisiya Wood and went into camp there. This fact was
duly reported by our cavalry at dawn the next morning; and the 11th
April was spent in desultory fighting between the Turkish cavalry
and our own, while our infantry awaited attack at Shaiba.

It was thought that the Turkish plan would be to attack Shaiba
Fort, the key of our perimeter defences, by regular troops, combined
by attacks on both flanks by their Arab auxiliaries. This surmise
proved to be correct, except that the Arab auxiliaries showed their
usual unreliability and treachery. During the battle they did not
fight at all, merely waiting in swarms on the flanks to see which
side was going to win; and they mercilessly harried their Turkish
friends when the latter were retreating after the battle.

(ii) *12th April.*—The expected attack started at 05-00 hours on ✓
12th April; but it consisted only of a fire fight at long range. The
enemy's main force withdrew at 08-00 hours, leaving a large body of
Arabs on North Mound, and snipers on the rest of our front. A
second attack started at dusk, but this faded out during the night.

Meanwhile, the 30th Infantry Brigade and 20th Mountain Battery
had made an unsuccessful attempt to wade from Basra to Shaiba
by the Zubair route; but had to return to Basra to collect "bellums"
before crossing by the direct bellum route the next day.

(iii) *13th April.*—On the morning of 13th April the 6th Cavalry ✓
Brigade was sent out to clear up the situation. It found the
enemy dug in in considerable strength on North Mound, and then
returned to camp with that information, after having attempted to
gallop the mound with one squadron only. The only men who actually
reached the mound were the Squadron Commander (Major Wheeler)
and his Senior Indian Officer, who were both killed on their objective. ✓
Major Wheeler was awarded a posthumous Victoria Cross. But
why was one squadron sacrificed when the whole Cavalry Brigade was
present and could easily have captured the objective?

Later in the day, the 16th Infantry Brigade captured North
Mound, and then cleared away the remaining enemy in the vicinity
of Shaiba. The 6th Cavalry Brigade finally charged the retreating ✓

enemy and caused them considerable loss. But General Melliss, who had assumed command at Shaiba that morning, ordered all our troops to return to camp for the night. That night was quiet, as the enemy had retreated to Barjisiya Wood. The enemy casualties during the day were estimated at 1,000, including 400 prisoners and 2 guns.

(iv) *14th April.* (See *Sketch Map No. 2*).—At dawn on the 14th April, General Melliss could see from an O. P. that large bodies of the enemy were in the direction of South Mound; but he did not know where the enemy's main force was. He had no aircraft with which to ascertain the enemy's dispositions before making his plan. However, he rightly concluded that the enemy had been badly shaken by the previous two days fighting and so decided to seek them out at once and destroy them without waiting for the 30th Brigade to arrive from Basra.

At 09-00 hours the force moved out from Shaiba with South Mound as its first objective which was captured easily by 11-30 hours.

The formation used for this advance is interesting, as it proved to be a bad one. The 16th Infantry Brigade, covered by cavalry patrols, moved straight on South Mound in artillery formation. Straight behind the 16th Infantry Brigade came all the Artillery and Divisional Headquarters. So far so good; but as General Melliss expected the enemy's main strength to be about Zubair he unfortunately echeloned back the whole of the 18th Infantry Brigade to protect the left rear of the 16th Infantry Brigade, and placed the cavalry Brigade on the right flank, in the "bight" in the floods to which I have already drawn your attention. It is easy to be wise after the event, but it is difficult to follow General Melliss' reasoning in this. He was not to know at this early stage of the battle that by placing his Cavalry on the right flank he would lose a golden opportunity of destroying the enemy at far less cost than his troops actually suffered; but surely his best plan would have been to put all his cavalry from the start on the open left flank, where they would have had room for mounted action; and where, by moving out wide, they could most quickly find out for him exactly where the enemy's main body was, and give him timely warning of the counter-attack he was expecting from Zubair?

Soon after South Mound was captured it became evident that the enemy were holding Barjisiya Wood and were not in the direction of Zubair at all. Consequently the two rear battalions of the 18th

Infantry Brigade were counter-marched to the right of the 16th Infantry Brigade.

While this redistribution was being made, General Melliss made a personal reconnaissance and convinced himself that the enemy's right was in line with the Watch Tower, but he was unable to fix the Turkish left. The two courses open to him were:—

- (i) to outflank the enemy's right and roll them up on to the marsh; or
- (ii) to find the enemy's left and put in his main attack there with the object of driving them off their L. of C.

Unfortunately he chose the latter course and sent his cavalry brigade to find the enemy's right flank while his infantry attacked more or less due West from South Mound. The result of this was that the cavalry never found the enemy's left flank at all, which actually extended right up to the mud on the edge of the flooded area, and so spent the day using dismounted action and doing no good at all; while the infantry attack became a frontal one, which only succeeded after many hours of very determined and gallant fighting at a cost of over 20 per cent. casualties; the total cavalry brigade casualties for the day being only 22 men.

The infantry fight is an interesting one and was a "Soldiers' Battle" in that its success was due entirely to the determination and courage of the regimental officers and men. Orders never reached companies at all, so our men never really knew their objectives. Everyone merely advanced straight ahead and fought whatever enemy he could see. I have already drawn your attention to the glacié slope from the slight ridge running N.N.W. from the Watch Tower. The Turkish trenches were skilfully sited on the reverse slope of this ridge, so that they were entirely invisible to us until our men topped the ridge, but our men were on the sky-line to the Turks at ranges varying from 400 yards to 900 yards, with not a scrap of cover of any kind. At first our men had to kneel or even to stand up to see to fire at the Turkish trenches. The fire fight lasted with dogged determination all day in spite of the intense heat of lying out all that time in the sun. At about 16-00 hours the Turkish guns ceased firing and then our infantry, who had by then fought their way to within 200 yards from the Turkish trenches, charged with the bayonet and captured the whole of the enemy's first position. The enemy in their second

position surrendered just as our men were preparing to assault it, and the whole position was in our hands by 17-00 hours.

The results of this battle were strategically very satisfactory. Our casualties for the three days fighting were 1,200; but the Turks lost twice that number from their regular troops alone (*i.e.*, 33 per cent.) and the remainder retreated to Nasiriya, harried all the way by their former Arab allies. Basra was made permanently safe and the surrounding Arab tribes declared their friendliness to the British.

But our troops did not pursue at all. Had they done so, that Turkish force, the stoutest fighters of whom escaped to fight against us again, would probably have ceased to exist; but our cavalry were spread about dismounted on the wrong flank and so were not available for pursuit; our infantry were exhausted; there was no transport to bring food out to them in their battle positions, and General Melliss was afraid of the treachery of the Arabs if our troops remained spread out in battle outposts for the night, so he ordered the whole of his force to return to Shaiba for the night instead of pursuing the defeated Turks.

Next morning our Cavalry moved out as far as Nukhaila and captured a certain amount of material, but the Turks had all got clear away by then and had removed all their guns.

(h) *Lessons of the Battle of Shaiba.*

This is an interesting battle and well worth detailed study. Some of its main lessons are briefly as follows, although there are many others which you can think out for yourselves—

(i) *The Plan of Attack.*—One of our Staff College Instructors had a saying that “The Best is the Enemy of the Good” (*i.e.*, that in war it always pays best to adopt a reasonably good plan quickly and carry it out with vigour and determination, instead of wasting time trying to find the best plan).

In this case General Melliss very quickly found the enemy's right flank. Had he then attacked that flank with vigour, meanwhile moving his cavalry round to that flank too, there seems little doubt that he could have put in a mounted surprise attack from the enemy's right rear and rolled up the whole enemy force northwards into the flood and completely wiped out the Turkish force with much less loss to his own troops than actually occurred. The ground admirably suited this plan.

Instead of this, he kept on extending northwards, trying to find the enemy's open left flank, which did not exist, in order to drive the enemy off their L. of C. This waste of precious time caused us many more casualties and very nearly resulted in a drawn battle.

(ii) *Cavalry must use their Mobility.*—I think there is little doubt that the 6th Cavalry Brigade were badly handled throughout. Their mobility and surprise action, which are the greatest assets of cavalry, were not used at all. They were used in the confined space on our right flank where they had no room for mounted action. So they had to get off their horses and act as weak infantry throughout the battle. And they were not available to turn the Turkish retreat into a rout when the Turkish resistance broke down at 16-00 hours.

F. S. R. II emphasizes all these points.

(iii) *Use of Reverse Slope Positions in Defence.*—The Turks gave us an excellent example of the advantages of a reverse slope position. The Turkish position was invisible until our infantry were well within rifle range of it; and then our infantry were always on the sky-line to the Turks and gave them excellent targets, while our men found it difficult to see the Turkish trenches and to fire at them without greatly exposing themselves. Our artillery found it even more difficult to bring fire to bear on these "blind" Turkish trenches.

But, on the other hand, the Turks were using a two-edged tool, for they could not have seen the movement of our cavalry had General Melliss used the crest-line to hide the move of his cavalry from our right to our left flank, preparatory to the surprise mounted attack suggested above.

(iv) *The "Fog of War."*—However, as I have already said, it is easy to be wise after the event. We must remember that neither side had any aircraft during this battle, so "the Fog of War" was greater than it is likely to be in modern battles in the future. And, also, the mirage very greatly increased General Melliss' difficulties in obtaining any reliable information at all. I have already emphasised this point in the introductory part of this lecture.

(v) *Use of Perimeter Camps.*—You will remember that I called your attention to the use of a perimeter camp as a refuge by General Delamain after his original landing at Sanniya. The same tendency was very marked at Shaiba, where our force originally defended a perimeter camp instead of a proper defensive position in depth, and.

then returned to that perimeter camp after each successful day's fighting on 13th and 14th April, thus each night giving the enemy peace in which to pull himself together.

Perhaps this was the result of too rigid an application of the principles of Mountain Warfare, which before 1914 was the principle training of the Indian Army. Perimeter camps are certainly necessary against trans-frontier Pathans; but we proved in 1916 and 1917 that they are not necessary against Arabs who are even more expert thieves than Pathans, but have not the same courage in attack. But the habitual use of perimeter camps certainly has a tendency to make troops feel and behave rather like a beleaguered garrison, and so are liable to undermine their offensive spirit unless this psychological effect is carefully guarded against.

16. *Phase (iii)—Operations in Arabistan to reopen the Oil Pipe-line about Ahwaz.*

✓ The Turkish counter-attack on Basra having been defeated, General Nixon's next move was to reopen the Anglo-Persian oil pipe-line. The Admiralty were becoming very anxious about this as the oil supply had by now been interrupted for some weeks.

✓ General Gorringe was despatched to Ahwaz with the remainder of the 12th Division, the 6th Cavalry Brigade, and all the Divisional Troops of the 6th Division.

✓ By the end of May 1915, General Gorringe had reopened the pipe-line, had cleared Arabistan of the Turks, who had retired to Amara via Bisaitin, and had punished the local Arabs for their former treachery at Ahwaz.

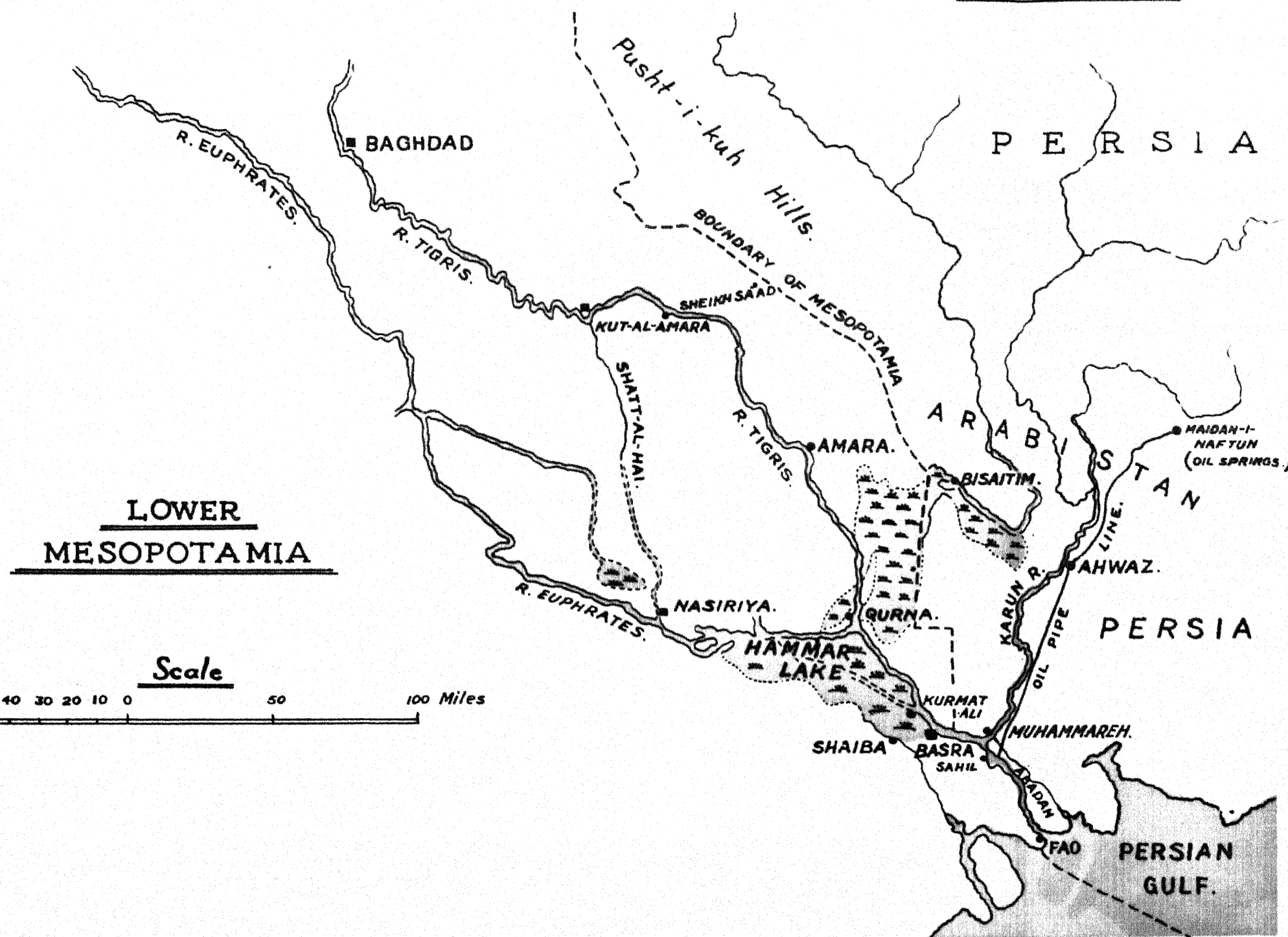
17. *Decision to advance to Amara.*

I have already given you a concise resume of the stages through which the main policy in Mesopotamia was gradually extended from the original limited objective of the capture of Basra to the over-ambitious attempt to capture Baghdad in 1915.

✓ At this stage the Secretary of State grudgingly sanctioned an advance to Amara, preparations for which had been going on for some time in consultation with the Government of India. The capture of Amara was, therefore, General Nixon's next move.

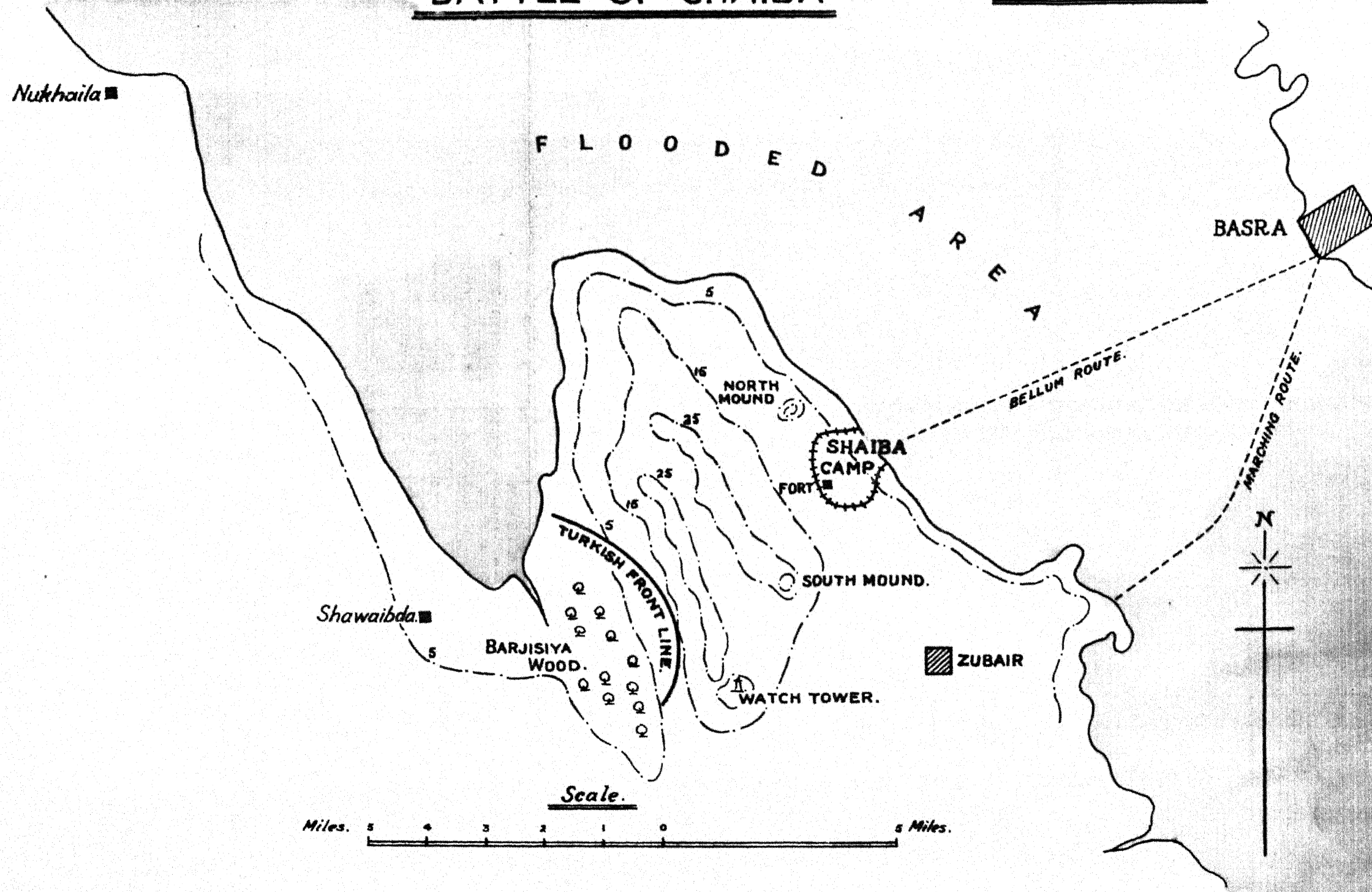
(To be continued).

SKETCH MAP NO. 1.



BATTLE OF SHAIBA

SKETCH MAP NR 2.



RIFLE TRAINING.

BY LIEUT.-COLONEL C. W. SANDERS, 1ST PUNJAB REGIMENT.

(This article is written from the point of view of training the army in India.)

Very considerable efforts are being made by those responsible for the training of our army to keep up with the ever-changing nature of modern warfare due to the rapid stream of scientific inventions and improvements. But it is submitted that one exception is our training with the rifle. In fact the recent annual rifle course has in general gone right back to that of pre-war days.

The immediate reply to this statement will very truly be that our standard of musketry in 1914 was extremely high and we were able to inflict enormous casualties, especially in France, with our rifle fire and with the same rifle as we use now. This is unquestionable ; but it is contended that circumstances have changed so considerably now that the training must be altered in order to meet them successfully. In 1914 our chief opponent was the German and our training for a high rate of accurate rifle fire was directed against the dense attacks he was practising then. These we were able to stop owing to the target he gave us in the early days, due to a grave error on his part. The Germans, judging largely by the capability of their own rifle, decided that our army could fire eight rounds a minute, much the same as his own troops ; consequently, basing his attacks on this assumption, he advanced in three waves with little extension between men ; the first wave was to be sacrificed, the second to reach our trenches, and the third to capture the position.

But, owing as much to the position of our bolt head on the rifle as to our training, excellent though it was, we could fire 12 to 15 aimed rounds a minute under active service conditions. Consequently none of the three lines arrived and our troops were given targets which we are not likely to meet again. But what was the part played by the rifle as the war continued ? More and more was it supplemented by automatic weapons and guns and became a weapon for isolated targets at close ranges and for assault action.

What will be the picture of a modern battle field ? Will we require to shoot at long range, *i.e.*, over 400 yards except with skirmishers or picked snipers ? Consider the special supporting fire now

available in the infantry alone as compared to 1914, and this does not yet seem to have reached finality.

Let us envisage an attack against a modern army. We will see nothing, until the infantry come within 400 to 300 yards of the foremost position. Our casualties will come chiefly from machine-guns, from artillery and certainly from some form of chemical invention—and our leading troops will not see what is hurting them. Therefore they must go on and are being trained to go on as far as is at all possible, trusting to the supporting fire detailed to help them, and to tanks perhaps moving ahead of them, and unless or until they reach their objective, or are held up by a strong point, our riflemen may not fire a shot. But they must be taught to engage odd targets, each man thinking for himself and dealing with situations on his own. This is the basis of L. I. tactics and requires every form of training to assist in developing initiative and resource in the man and the junior leader.

In the defence we will not be faced with waves of advancing unprotected infantry, we must be prepared to deal with infiltration tactics by troops amply supported by fire specially detailed and our targets will be small and fleeting until they reach the closest ranges. Therefore the bulk of our infantry require training for this.

How ?

Not by firing most of their rounds at an obsolete target in order to obtain an artificial result on which may depend a fair proportion of their daily pay.

A standard is necessary, but let us make it a more practical one.

Can our N. W. F. tribesman afford to fire hundreds of rounds at upright paper targets ? And is his standard of shooting low when it comes to the test ?

It is urged that a more practical system of training be introduced and one that is more in accord with the modern methods of teaching, namely, by producing a practical result as early as possible and which will, incidentally, ingrain in the man the habit of shooting to kill with his first round.

With this object in view the following suggestions are submitted :—

(a) Liven up recruits' training.

(b) Introduce a more practical annual rifle course for the trained soldier.

(c) Introduce a practical standard by which to test a unit's war fitness with the rifle.

Let us consider these suggestions in order.

(a) *Recruits' Training.*

An Indian recruit spends about 40 hours at the elementary lessons of aiming, firing and care of arms before firing a shot himself and seeing a shot fired. Is this in accordance with the training method of demonstration, etc., as advocated by schools of instruction, and do the schools really "demonstrate and practice?" Instructors may think they are demonstrating, etc., but what do they demonstrate—the standing position, the lying position, etc., etc., with meticulous details which are unnecessary.

The most important lesson in any subject is, or should be, the first. At this stage you deal with an empty brain, thirsting, consciously or otherwise, for information and impressionable to a degree that can never again be attained. It is, therefore, in this lesson that the student should be given a vision of the possibilities of his subject. It is suggested that at his first lesson the recruit should look over the sights of a rifle correctly aimed at a "chatti" or similar target and clamped down and that he should press the trigger and see an immediate result from his first round. He will never forget it and will want to do it again. He will at once get some idea of the rules for aiming and it is held that he will take far more interest and consequently far less time in learning to shoot. "This is a practical demonstration." Instead of this his instructor, with the present system, cannot help surrounding himself with mystery which can only be unfolded lesson by lesson for 40 hours.

This example might be multiplied—but sufficient has been said to indicate the writer's ideas as regards elementary training. As a contrast to the amount of preliminary training before firing, can any reader remember how much he did before producing excellent results in the very high standard required of a public school shooting VIII?

(b) *The annual rifle course.*

It is submitted that the main alterations required are as follows:—

- (i) Practical targets.
- (ii) Encouragement to kill with the first rounds.
- (iii) Bridge the gap between range and battle practices.

Again picture the modern battlefield in attack or defence. What targets will the rifleman see? Does he normally aim at a contrast

bull's eye, anything up to three feet off the ground or hurt his immediate enemy if his bullet does not find its mark? Then why do we trouble to impede the flight of millions of bullets by shooting them through large paper targets, a hit on any part of which counts at least one point? Almost as much use to let the bullet be aimed direct at the stop butt. We would at least keep the markers' heads down similarly to those of the enemy in a trench.

It is submitted that as soon as a recruit can fire a consistent group and has learnt to apply his fire to the present form of range target, he should never again in his service fire at such an impractical mark unless he falls off so much as to require elementary revision. A target to stimulate reality should be near the ground and of a practical shape. At the same time the value of a ricochet, which up-to-date, has been looked upon with horror, should be recognised and points credited during range practices. In order to show where "misses" have gone there can be invisible paper above the aiming mark, for this reason only, but not to count any point. As soon as possible all firing should be at hit or miss falling targets. The advantages of these targets are—

- (i) They produce an immediate result.
- (ii) They make the man change his aim from one enemy to another.
- (iii) They minimize the possibility of falsifying results.

For later collective practices, where "area" shooting is necessary the screen would still appear to be the best and most convenient target, marked off in rectangles similarly to M. G. targets.

A suggested pattern of target is given at the end of this paper.

The next point is the annual course itself. It is submitted that even the revised course does not sufficiently bridge the gap between the range practice and the battle practice. Although the former should be reduced to a minimum and be a definite lead up to the practical firing, it is still too long and uses too many rounds. The only advantage to the man and to the State in the case of a good shot now is to let him off firing a certain number of practices. This is sound as far as it goes. But there is still no incentive to that essential outlook of killing your enemy before he kills you. This can be obtained by fixing a standard score of, say, two or three hits out of five rounds; every round saved by obtaining the standard score at once to count one or more points; rounds saved to be made available

for some form of extra practice or used for the higher training of men who are selected as special skirmishers and sharp-shooters in the envisaged Light Infantry method of attack.

This system is simple to work both in slow and rapid practices if the latter are carried out against a row of falling targets.

It is submitted that firing on the range at targets as suggested above will, in itself, go a long way towards making our annual rifle-course practical and to bridging the gap between range and field practices.

(c) The figure of merit for classification practices is now not included in the annual weapon training return, but it still has to be worked out and shewn to inspecting officers should they call for it. This is a step forward, but it is submitted that a more practical test should be devised for obtaining a standard of fitness. The writer is not against a certain practical competitive standard and the results of firing range practices will always be interesting. But the only test of a unit's war efficiency with its weapons is in the field under conditions approximating as much as practicable to those likely to be met with on active service. If, therefore, instead of judging by the results of range practices, a unit was tested by the Brigadier watching certain sub-units, selected by himself, firing simple battle practices, based on the warfare suitable to the terrain in which the unit was stationed, it is held that a much truer, higher and more realistic standard would be attained. In order to practice for this, C. Os. should be allotted rounds saved by the introduction of a smaller course on the range and classify his men and section leaders in "competitive practices" designed to suit the ground and carried out either on the range where necessary or in the country where possible. It should be on the result of these practices that a man should be recommended for his proficiency pay and leaders and sub-units tested for efficiency.

The annual course might thus be divided into the following parts :—

			Rounds.
Part I.—Individual Instructional	..	..	40
Part II.—Individual Qualification	..	..	35
Part III.—Competitive Range Practices	..	..	35
Part IV.—Battle Practices	..	..	30
C. O.'s pool for zeroing, grouping and Brigadier's Inspection			30

A suggested rifle course is attached. In Part III the practices can be altered to suit local conditions. This course is largely based on one which Colonel L. M. Heath, prepared and was allowed to try out experimentally with interesting results while commanding the 1st Bn. 11th Sikhs. The writer is greatly indebted to him for allowing him to make use of his notes in general, the publication of the revised targets he used with the course and the course itself. He has however made one important alteration *i.e.*, the inclusion of individual rapid practices in each part.

This latter point is a matter of opinion, but it is held that rapid fire is still most essential and requires considerable training. He has further altered the name of Part II to "Qualification" instead of "Classification" as classification now is carried out in Part III and under the Brigadier's direction.

Should the suggestions be considered and C. Os. be given more freedom in making the annual weapon training courses more "live" and more suited to local conditions, it is submitted that our rifle training will take a greater share in developing the skill and initiative of the soldier in addition to its special task of fitting the army for using this weapon in the field.

SUGGESTED ANNUAL RIFLE COURSE.

PART I.—INSTRUCTIONAL.

<i>Number of Practice.</i>	<i>Range.</i>	<i>Position.</i>	<i>Rounds.</i>	<i>Standard.</i>	<i>Target.</i>
1	200 Yds.	Lying	5	3 hits	Lying figure.
2	200 "	Sitting or kneeling.	5	3 "	Trunk figure.
3	300 "	Lying (rest)	5	2 "	Lying figure.
4	300 "	Lying (rapid)	10	5 "	"
5	400 "	Lying (rest)	5	2 "	(Falling) lying figure.
6	150 "	Standing (quick) with bayonet.	5	3 "	Standing figure.
7	200 "	Snapshooting from trench.	5	2 "	Trunk figure.

Colonel Heath allowed only those who qualified at 200 and 300 yards to fire at 400 yards. The writer would like all ranks to have practice at this range in Part I. A maximum rate fire was not included in the previous course but this is a matter for consideration.

PART II.—QUALIFICATION.

<i>Number of Practice.</i>	<i>Range.</i>	<i>Position.</i>	<i>Rounds.</i>	<i>Standard.</i>	<i>Target.</i>
8	150 Yds.	Standing (quick) bayonet.	5	3 hits	Standing silhouette exposure 3 seconds.
9	200 „	Lying (quick)	5	3 „	Falling iron figures or plates.
10	200 „	Sitting or kneeling (snapshotting).	5	3 „	„
11	300 „	Lying	5	3 „	„
12	300 „	Lying (rapid)	15	5 „	„
			35		
13	400 „	Lying (rest)	.. Rounds saved up to five.	3 „	„

NOTE :—Anyone scoring 3 hits in each practice will cease fire and count one point for each round saved ; these rounds being available for practice at 400 yards.

PART III.

COMPETITIVE PRACTICES—FOR TESTING INDIVIDUALS BY SECTIONS AND THEIR LEADERS.

Practices to include Individual and Collective fire at plates and screens, or other targets suitable to environment from 300 to 600 yards, with not more than one practice at 700 or 800 yards.

The practices will include—

Aiming off for movement.

A maximum rate of fire practice at a markable target, *i.e.*, row of falling plates or rectangled screen.

A section practice of say 15 rounds at a rectangled screen where no points given for the first five hits on each rectangle.

One fire and movement practice.

The course to be the same throughout the unit or station and results to be registered.

ROUNDS 35.

PART IV.—BATTLE PRACTICES.

It is realized that actual sections cannot always fire as such owing to administrative difficulties, but, provided men are practised in firing collectively, they will receive the training required and the important factor of practising section leaders will be possible at any time.

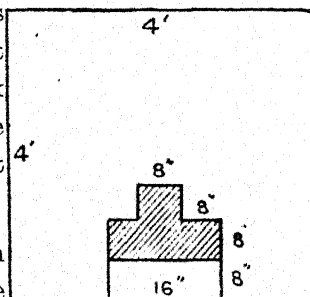
The best results undoubtedly would be obtained if all companies, etc., could carry out this part (*iii*) during the early stages of company training as part of that training. In this case they would be invaluable as a test of section leading based on a scheme previously carried out as a T. E. W. T., or with blank. They would also lead up to actual battle practices.

A pattern of target as used for Colonel Heath's course but slightly altered is as under :—

For instructional practice a conventional head and shoulders target on a 4 feet square paper-covered target of a darks hade to be called "lying figure."

The aiming mark is shaded and hits on this to count three points. The light coloured rectangle below the aiming mark to count one point so as to bring out the value of aiming low and allowing credit for ricochets.

Ricochets to count two points if on the aiming point and one point on the part below.



Remainder of the target to be used for indication of shots only.

Targets on these lines to represent kneeling and standing figures could be made and called "Trunk figure" and "Standing figure" either on a square paper target for instructional practices or the present "Silhouette" targets, of falling variety for choice, for qualification practices.

For Parts III and IV targets varying from rectangled screen to falling plates, *chattis* and baskets could be used.

COURTS-MARTIAL v. CIVIL COURTS.

BY BRIGADIER L. M. PEET.

The questions in Parliament on the Baillie-Stewart trial by General Court-Martial in England show a prevailing state of ignorance as to Courts-Martial. It may, therefore, perhaps be of interest to compare Courts-Martial with Civil Courts. This article deals primarily with British Civil Criminal Courts, and chiefly with Courts-Martial under the Army Act, but the remarks apply *mutatis mutandis* to all Courts-Martial.

The Civil Courts in England are Courts of Summary Jurisdiction, commonly known as Police Courts, Quarter Sessions, and Assizes, the first corresponding in powers more or less to District Courts-Martial, and the last two to General Courts-Martial, but the personnel of these Courts is very different in training to that of members of Courts-Martial.

With the exception of the Assizes, which are conducted by Judges, and the Courts in London and certain of the larger towns and cities, the Courts are on the average composed of persons who are entirely without any legal training whatsoever.

In London and a number of provincial towns Stipendiary Magistrates, who are Barristers of several years standing, sit as Courts of Summary Jurisdiction, with or without Justices of the Peace, and take responsibility.

In other cases the court is composed of lay J. Ps., who may be advised by the Clerk of the Court. This clerk, except in London, is usually a Solicitor, but frequently he is a practising Solicitor and, therefore, cannot give the necessary attention to cases in Court and, in any case, he is not in authority and can only advise.

Now, who are these lay J. Ps.? They are generally persons chosen from all political parties, and frequently appointed merely as a reward for political services, without regard to their suitability as J. Ps. This criticism does not apply to the few women magistrates. In the case of the men their appointment is often the result of 'wire pulling.' Their suitability may be judged by a quotation from the Lawbreaker by E. Roy Calvert and Theodora Calvert, on which much of this article as to British Criminal Courts is based.

"The chairman of a Staffordshire Bench told a young man who was giving evidence on his own behalf a few years ago,

'Now young man, not so fast, not so fast. You must ha' done summat or you wouldn't ha' been summonsed.' "

The legal minimum for a Bench at a Police Court is two J. Is. or one Stipendiary Magistrate.

The next Court is the Quarter Sessions, which consists of the same J. Ps., except in some 100 cities, which are presided over by a chairman, who is called a Recorder, and is a barrister of five years standing, and is sole judge. The other Courts are generally an unwieldy mass of J. Ps., who use the occasion of a Quarter Sessions as a good opportunity for showing themselves on the Bench, and meeting their contemporaries at lunch.

At a Quarter Sessions there is a jury, except when the Quarter Sessions is hearing an appeal from a Court of Summary Jurisdiction.

The writer is acquainted with one J. P., who is a retired Judge of the High Court, and whose remarks are very scathing as to the Courts of Summary Jurisdiction and Quarter Sessions he has attended. He compares them very unfavourably with the average Criminal Court in India, and often comes back almost speechless with indignation at the trials at which he has been present.

I have no comment on the Assizes, at which a Judge presides, other than that being human they sometimes err, as is shown by the cases quashed by the Court of Criminal Appeal.

The members of a Court-Martial are composed of officers who, from the day they joined as cadets at Sandhurst, Woolwich, etc., receive training in law, and until promoted Major have to pass a series of examinations in law, and, in addition, those who go to the Staff Colleges have to pass in law to obtain admission, and their training in law is continued at the Staff Colleges. Further at the Senior Officers School there is also legal training. Also all officers before they sit on a Court-Martial are required to attend, as officers under instruction, as many trials as possible. Therefore even the most junior member of a Court-Martial has some legal knowledge, while the President is an officer of experience, especially at a General Court-Martial where, if possible, he is a General or Colonel.

A soldier, accused of an offence, is first brought before his Company Commander, who has certain limited powers of punishment. If he exercises those powers the soldier can always complain to his

Commanding Officer, but such complaints are very rare. Reports of such punishments must be made.

If the offence is one with which the Company Commander cannot deal, the accused is taken before his Commanding Officer. The latter hears the case and either dismisses it, remands the accused for trial by Court-Martial or awards punishment himself, with the proviso that, if his award entails any forfeiture of pay, he must ask the accused if he will accept his award. If he fails to ask this question the award is illegal and will be quashed. The awards of a Commanding Officer are inspected by the Brigade Commander periodically.

The soldier has the same right of complaint against the award of a Commanding Officer, but very rarely exercises this right.

Thus no summary award can be given without scrutiny by higher authority. If a case ends in remand for trial by Court-Martial the evidence is reduced to writing and again considered by the Commanding Officer, who may decide to dismiss it, award punishment himself, subject to the proviso mentioned above, or apply for trial by Court-Martial.

In the latter case the Summary of Evidence is sent to the Staff concerned and perused by a Staff Officer who submits it to his Commander with his observations. If the Commander decides on trial, he gives his orders to this effect and approves the charges. If in doubt he sends the case to the Judge Advocate General's Department for advice. In fact every case of a civil offence must be so referred. Thus it will be seen that before a trial is convened great care is taken to see that there is a good case. The only exceptions are those where an accusation is made and it is in the interests of the accused to get his name cleared by a trial.

It may be as well here to describe the Judge Advocate General's Department, as the comparison between Court-Martial and Civil Courts largely rests on the existence of this Department.

In England the members are military and civilian, but all are barristers or solicitors and the Judge Advocate General is a K. C. Many trials are conducted in England by the Department, which often furnishes Prosecutors and all Judge Advocates required.

In India the members are all of the Indian Army, and may or may not be barristers or solicitors, but all are required to pass a

five days examination in law and must obtain 80 per cent. of the total marks possible to pass. The quality of the standard required may be judged by the fact that a Cantonment Magistrate of several years standing failed to pass it.

The two Departments are entirely separate but correspond direct, and the main differences are that the Department in England is independent, being a joint service for the War Office and the Air Ministry, while the Department in India is attached to the Adjutant-General's Branch at Army Headquarters, and has more work, having to deal with, besides the Army and Air Force in India, the Indian Army, Indian Air Force, and often with questions affecting the Indian Marine; also frequently the Indian States refer questions to the Judge Advocate General in India in regard to their own forces.

Owing to the immense distances in India and the smallness of the numbers of the Department, members of the Department cannot attend so many trials as in England, but in recent years members have travelled as far as Aden and Burma from Simla to do so. In other cases, where the number of trials precludes such attendance, a capable officer is selected by the Convening Officer, and a Memorandum of Instructions for his use prepared by the Department, if personal instructions cannot be given.

Now let us compare what happens, when a man has been convicted by a Civil Court, with the procedure after conviction by Court-Martial.

There is a right of appeal from a conviction by a Court of Summary Jurisdiction to Quarter Sessions, but this is largely illusory, since, as a preliminary, £50 surety is usually required which naturally few of the persons convicted can produce.

In 1930, according to the Lawbreaker, there were only 267 appeals from these Courts, but out of these 74 were quashed, and in 81 other cases the sentence was modified. There were 665,332 trials by these Courts in 1930. What would have happened if the majority of these persons convicted had been able to appeal?

There were 8,384 persons tried the same year by higher courts, and from these, *i.e.*, Quarter Sessions and Assizes, appeal in 261 cases was made to the Court of Criminal Appeal. In these appeals no surety is required, but there are generally lawyer expenses. The Court of Criminal Appeal quashed 23 cases altogether, also two sentences, and substituted sentences in 26 others.

In all cases of conviction by Civil Courts there is no scrutiny of the case, except in the case of an appeal.

There is an enormous difference in the case of Courts-Martial. It is true that technically there is no right of appeal, as such, from a conviction by Court-Martial, but a soldier has the right of complaint, and any such complaint as to conviction or sentence is treated as if it was an appeal. In 1932 there were only 10 appeals in India, and the majority of these were only against the sentence.

When a trial is finished the proceedings are sent, according to the directions on the Convening Order, either to the Confirming Officer, or to the Judge Advocate General's Department.

In the former case the trial is first scrutinised by a Staff Officer, who puts it before the Confirming Officer with his observations. If the Confirming Officer is in doubt he can refer to the Judge Advocate General's Department.

Where there is a conviction he can order a revision of the finding or sentence, not confirm the proceedings, or confirm, and it must be remembered that no conviction is legal until it has been confirmed. Thus a trial is scrutinised by at least two persons with some legal training, and often by three, one of whom is an expert.

There is a further difference from procedure in Civil Courts since at a Court-Martial the whole proceedings of a Court must be recorded, and all the evidence and the record of a District Court-Martial is kept for three years, and of a General Court-Martial for seven years.

But the scrutiny of trials is not ended yet.

If the Confirming Officer acts without asking for advice, the proceedings go to a member of the Judge Advocate General's Department in a Command in India, and then to Simla, where it is again scrutinised by two of the officers of the Department, including the Judge Advocate General in India, who personally goes through every trial.

Each scrutiny in the Judge Advocate General's Department is a virtual appeal and the proceedings are viewed in the light of decisions by the Court of Criminal Appeal, and, if this Court would have acted in any case, that action is taken.

Every trial under the Army Act is then sent to England, where it is again scrutinised by the Judge Advocate General's Department there.

Therefore, in every case, at the least, there are virtually four appeals plus two scrutinies by a Staff Officer and a Confirming Officer. If the accused makes a complaint there is further scrutiny both by the Judge Advocate General's Department and by the Confirming Officer and his Staff, and by the next higher authority also. In an extreme case the scrutiny, besides that by the Judge Advocate General's Department, may be by every Commander from a Brigade Commander upwards to His Excellency the Commander-in-Chief, and also by three to four officers in the Adjutant-General's Branch at Army Headquarters, including the Adjutant-General in India, followed by the Judge Advocate General's Department in England, the Army Council and His Majesty the King.

There is another great difference as regards the sentences awarded by Court-Martial and those by Civil Courts.

A soldier once tried by Court-Martial is clear of all known offences. Though not a matter of law, this is a matter of practice.

A soldier charged with many offences is not generally tried for all of these. The major offences are selected, and a Court is unaware that any others have been committed. The only case where they are aware of these, is if there is more than one charge sheet and the Convening Officer has directed that in case of a conviction on any charge sheet the rest are not to be proceeded with.

Even then, the Court awards sentence only for the offences of which an accused has been convicted, and ignores the other charge sheets entirely.

In cases tried by Civil Courts, however, the only way an accused can obtain a clear sheet is to ask the Court in awarding sentence to take into consideration other offences known to the police. Therefore frequently a Civil Court awards sentences for offences on which the accused has never been tried at all.

In 1930 no less than 35,115 indictable offences were thus cleared up without being the subject of trial.

Such persons have no opportunity of making a defence on these offences, except to the police, while in the case of soldiers they have

three, before the Company Commander, the Commanding Officer, and at the taking of the Summary of Evidence.

There is no chance in the case of soldiers that, once acquitted of an offence, they will be immediately re-arrested on leaving the Court and charged with another known offence as one frequently sees happen after a trial by Civil Court. There are no "cat and mouse" dealings in the services.

Further, the members of a Court know the circumstance, life, and effects of a sentence on an accused, and are not completely ignorant of all these as in a Civil Court. The sentences of a Court-Martial are awarded with due consideration of these factors, and all reviewing officers also have them in mind.

It is true that a Confirming Officer, when making his decision as to confirmation or non-confirmation, may take into consideration matters of which the Court was unaware. Many Confirming Officers refuse to do this if they know anything detrimental to the accused, but always consider anything in their favour. If they do consider these other matters, it is only in regard to making a decision as to confirming the sentence as awarded, or commuting, reducing or remitting it. A Confirming Officer cannot increase a sentence.

To revert to the trial itself there is a further difference in favour of a Court-Martial. The Poor Prisoners Defence Act has extended the facilities for the defence of poor persons, but it does not apply to all cases, and many persons are sent to prison undefended, unless they can pay a lawyer.

At a Court-Martial every soldier is entitled to a Defending Officer, and few, except barrackroom lawyers, do not exercise their right. These Defending Officers take great trouble in their duty, invidious though it sometimes is, in fact the more invidious the greater care taken. In a recent unpleasant case, for instance, where the Defending Officer knew the accused was guilty, he fought for him throughout the whole trial and made an excellent final speech.

The total number of trials by Court-Martial under the Army Act in India in 1932 was 551, out of which there were 58 acquittals, 11 trials were not confirmed, *i.e.*, the Confirming Officer was not satisfied with the conviction, and eight were quashed after confirmation. It is suggested that in spite of the continuous scrutiny on each trial, a virtual dealing with each case as the Court of Criminal Appeal would have

dealt with it, the small number of trials found unsatisfactory compares very favourably with the record of Civil Courts in England in 1930, leaving out of consideration the number of cases tried by Civil Courts, which were not scrutinised at all, because there was no appeal almost certainly owing to the lack of funds of those convicted.

A few years ago under Martial Law Military Courts were established, and a Senior Civil Judge was incorporated to act with the Court. He commented extremely favourably on the conduct of these Courts, their ultra-impartiality, their carefulness, and the strict attention paid to every point in the trials. The Military Courts were soon abolished, and this Judge had to try the cases by himself, and he kept expressing his regret at the abolishment. These Military Courts acted exactly in the same manner as Courts-Martial.

There is no claim that every Court-Martial is a model of perfection. Cases do occur where extremely curious verdicts are given and where serious errors are made, but the correction of these is not delayed until a complaint is forwarded by the person convicted. In fact very rarely does an accused realise there have been any errors.

No such case is possible, for instance, as occurred recently, where a soldier was convicted by a Civil Court, awarded six months imprisonment, and served three months of the sentence, when the conviction was quashed by the High Court on the grounds that the Court had no jurisdiction. The soldier convicted was himself unaware of this, and the quashing of the conviction was obtained by action from Army Headquarters. Cases have occasionally occurred when a Court-Martial has acted without jurisdiction, but the trials were promptly quashed before the soldiers concerned had time to serve any sentence.

Also no such conviction is possible at a Court-Martial as occurred recently in a French Court. The case was technical and tried in a Country Court, and the presiding Judge was certain that the jury could not follow the evidence, though he himself was satisfied of the guilt of the accused. To his surprise the jury brought in a verdict of guilty. He met one of the jury afterwards, who said to him, "We weren't going to be thought any more ignorant than people in Paris."

The number of acquittals shown above disclose how reluctant a Court-Martial is to convict without very clear evidence. Many of these acquittals were clearly of persons guilty of the offences charged,

but the Courts generally obviously acquitted, because not satisfied that all reasonable doubt was removed. Of the convictions quashed or not confirmed, the accused was again in many cases clearly guilty, but something possibly prejudicial to his interests occurred, and action accordingly was promptly taken.

The Criminal Courts in India consist of Magistrates of different status and powers, Sessions Courts and High Courts. There are no appeals for the lesser sentences of some of these, such as up to one month's imprisonment or Rs. 50 awarded by a Sessions Court, or fine up to Rs. 50 by Magistrates. In other cases there is a right of appeal.

In all cases some sort of record of the gist of the evidence and proceedings is made, and in the majority of cases the full evidence is recorded. These records may be asked for and inspected by the higher Magistrates, Sessions and High Courts, and some years ago, at least in one Province, a High Court Judge made tours of inspection of the lower Courts.

The writer was privileged to be present on one of these tours, but was debarred from being a spectator of the telling off's administered to certain of the Magistrates, but saw the approach, somewhat unwilling, to the room of correction. These tours at any rate on the part of High Court Judges in some provinces, seem to have lapsed.

The position, therefore, in India appears to be more satisfactory than in England.

With regard to Courts-Martial under the Indian Army Act, the chief differences are the Summary Court-Martial, and the possibility of an acquittal not being accepted.

The sentence of a Summary Court-Martial requires no confirmation, but the case is immediately scrutinised in the Judge Advocate General's Department, and then sent to the Brigade or District Commander with advice as to legality, or whether the proceedings should be quashed or the sentence modified. Acquittal by a Summary Court-Martial is final.

The practice of the Civil Criminal Courts in India is followed as to acquittals by other Courts-Martial, and such acquittal requires confirmation, and therefore can be sent back for revision. I can only recollect one case in the last 14 years when this was done.

The same scrutiny of these Courts' proceedings takes place as in that of trials under the Army Act except that the proceedings do not go

to England, which would be a useless procedure, as the Judge Advocate General's Department there have no acquaintance with Indian Law.

The Courts-Martial under the Indian Army Act are generally fewer than under the Army Act. In 1932 there were 242 trials, out of which there were 10 acquittals, seven cases quashed, and one sentence remitted.

In spite of the litigious tendencies of Indians there were very few complaints either as to conviction or sentence.

To sum up the case, the points in favour of a Court-Martial are,—the Court is composed of trained officers, the accused is defended, unless he declines defence, he is punished only for an offence on which he has been tried, he is clear of all known offences after trial, and each trial is carefully scrutinised many times, and in all cases the person convicted has the right of complaint, and no expense to the complainant is involved in this virtual appeal.

THE DISARMING OF THE NATIVE TROOPS AT MIAN MIR,

MAY 13TH, 1857.

A PRIVATE SOLDIER'S NARRATIVE.

By C. T. GREY.

Before setting down the very interesting and hitherto unpublished narrative of Private John Stratton of the 81st Foot, it is necessary to preface it with an account of the strength of the troops at Lahore and Mian Mir (now Lahore Cantonment) in May 1857 and of what arrangements were made previous to the parade at 4-0 a.m. on the 13th of that month with which Stratton opens his account.

The troops were as follows :—

81st Foot (now the 2nd Bn. the Loyal North Lancashire Regt.).

Two troops Bengal Horse Artillery (2nd and 3rd, 2nd Brigade).

Four Companies of Foot Artillery (Nos. 1, 2, 3, 4 of the 4th Brigade).

8th Bengal Light Cavalry.

16th Bengal Native Infantry.

26th Bengal Native Infantry.

49th Bengal Native Infantry.

The 81st were very weak having lost very heavily from cholera in 1856 when no less than four hundred men, women and children of the regiment and of the Foot Artillery succumbed in the second of the six great epidemics which devastated the troops at Lahore and Mian Mir down to 1872. According to the Punjab Records, their total strength was about five hundred and fifty. The Horse Artillery were armed with 9-pounders and the Foot Artillery with bullock-drawn 12 and 18-pounders which, not being sufficiently mobile for the surprise movements intended, were not brought to the disarming parade.

One company of the 81st formed part of the garrison of the Citadel, the remainder of which consisted four companies of sepoys.

At that period the sepoy regiments were never less than one thousand strong, especially those in the Punjab which were generally about twelve hundred strong.

Until the 7th of June the troops were commanded by Brigadier-General Stuart Corbett, Colonel of the 16th Bengal Infantry, after

which date commenced the feeble and vacillating *régime* commented upon by Stratton and his gunner friend. By the morning of the 12th of May the reports of the many outbreaks convinced the Civil and Military authorities that the disarming of the troops at Lahore and Mian Mir was imperative. Together with these reports secret information and intercepted letters had revealed a concerted plot between the native troops in the fort and the cantonment to rise on the 17th and massacre all the Europeans.

It may seem strange that with so many British troops the sepoys should have contemplated such a rising, but the fact was that, inspired perhaps by the adulation accorded by the authorities to their military exploits in recent wars, they considered themselves fully equal, individually, to British troops, and moreover, they had the dreadful example of Meerut where two thousand British soldiers were kept idle while the mutineers ravaged, burnt, and murdered at will. It will be noted that Stratton writes bitterly of the treatment of the British soldier and the contempt in which he was held, which is correct enough, for native soldiers were exempt from flogging, but British soldiers were flogged before the garrison. Besides this, all commissariat and treasure guards as well as forts and arsenals, were entrusted to sepoys, the British soldier, whether of Queen's or Company regiments, being considered unreliable.

The measures for disarming the native troops were concerted in perfect secrecy, the staff and commanding officers only being informed; and further to disarm suspicion, a ball was held at Government House on the night of the 12th which was kept up until shortly before the time fixed for the parade. At midnight two companies of the 81st were sent secretly to take over the Citadel and disarm the sepoys therein. Another company was marched to Shalimar and there 'embussed' in ekkas (four men to each) in which they arrived at Fort Govindgarh, Amritsar, thirty miles away, just before dawn and disarmed the native garrison.

The letters now quoted were given to me some years back by a grandson of Mr. Henry Gregory who, in February 1857, founded a small weekly journal named the "Punjabee," which ceased to exist in the following January. They were the originals of letters published in this paper and preserved by Mr. Gregory, who had intended to write an account of the Mutiny in the Punjab. These letters are from subordinates in the public services and private soldiers and are

interesting as contemporary accounts, hitherto unused, containing incidents from an unusual point of view.

Private John Stratton's letter reads :—

MEEAN MEER, 30th June, 1857.

DEAR MR. GREGORY,

In response to your request for some account of the disarming of the Native troops at Meean Meer on the 13th of May last, I send you the following :—

On the morning of the 10th of May the whole of the troops at Meean Meer were paraded on the great parade to hear read the General Orders concerning the fate of Mungal Pandey and Issoorie Pandey, mutineers hanged at Barrackpore. That evening orders were issued for another general parade on the following Monday, though the reason was kept a very profound secret, the Brigadier having acted on the very wise principle that two can keep a secret providing that one knows nothing about it. There were many surmises, all said to be true, but all equally wrong. Monday morning came and at three a.m. our remaining five companies paraded and were served out with service ammunition. "Loosen your service ammunition" said the Colonel. Then were we all seized with a "Whats-up" sort of feeling-curiosity being all a tip-toe, with every one's eyes opened to their full extent and the drums of our ears stretched a long way above concert pitch. Because you must know, Mr. Gregory, that we were all blessedly ignorant as to the especial favours to be dealt out to us by these generous sepoys on the following Friday. Many thanks to them for their kind intentions? They also were as ignorant as to what was to happen to them, and I believe were told that there was to be a field day for which blank ammunition would be served out to them on the parade ground. So they marched on the ground quite cheerily, the band of the 16th Native Infantry playing "There's a good time coming," though what it was, none of us even suspected. Well, we were all formed up in line of contiguous columns and a letter was read from the Governor-General in Council to the sepoys telling them what fine fellows they were, and how much honour was supposed to belong to them. Such nice mellow words!

"Countermarch by sub-divisions round the centre of battalions" said our Brigadier, and he said it so low and cool that one imagined

he was afraid of disturbing the delighted musings of those faithful sepoy. At the same time, a wave of the hand set the Horse artillery in motion and, by the time the counter-march was completed, the guns were in position, unlimbered and bearing on our columns. Being on the right of the Grenadier Company, I heard the Brigadier say to our Colonel, "Take your battalion and draw up in line behind the artillery; load with ball and be ready if required to fire." When this movement was completed, the Colonel said "Men, let there be no hesitation! fire with the utmost effect."

"Oh! thought I," this is to be a pitched battle, so I began to count the odds by numbering the files in their front divisions by which I made the lot to number about 3,500, including the cavalry. As there were only five companies of our regiment each averaging 29 files making about 290 in all, they were about 12 to 1. Now, to bring the artillery into account. There were about 300 paces between the sepoy and the guns, of which there were twelve in all each loaded with shrapnell containing about 250 bullets per shell. Each gun could get off three rounds before the enemy got to them and, as they were in close column, 9,000 bullets would have a very killing effect."

Just as I had arrived at the conclusion that, by the time the sepoy reached us, the artillery would have left them about 4 to 1—just about a fair odds, we heard the command "Pile Arms," and a few minutes later saw them pile and then march back from their arms for about 300 yards. They were then halted and ordered to *Bito* and the cavalry to dismount, which they all did, their European officers moving to the flank out of the line of fire of the guns. And then, as if by magic, there appeared on the ground about 200 bullock carts. Two of our companies slung their rifles and, falling out, loaded up the muskets and cavalry swords which they dropped on the ground when they backed out and joined the sepoy.

And now that the secret was out, didn't John Sepoy stare with looks that seemed to say, "sold, sold," which they truly were, for they saw that their hellish designs were frustrated as they beheld their arms marched off with a guard of two of our companies to Lahore Citadel. "What made you give up bunduk, John?" said one of our men to their camp colour man. His answer was to point to the artillery guns. Argument enough. Blessings rest on every hair of your venerable old head, our Brigadier. To you all owe their most sincere thanks for your deep penetration, your prompt and cool

measures, and your fearless examples have saved many, if not all Europeans, from cruel and treacherous murder.

It is now divulged that the intention of all the regiments was to rise simultaneously on Friday, the 17th of May, those in the fort being ordered to kill all the Europeans there, seize the treasury, and release the Nawab, held prisoner there, to act as their leader, whilst those at Meean Meer were to do their best to fall suddenly on us and murder all they could. There would thus have been three infantry and one cavalry regiments, leadered, moneyed and fully equipped and there is no doubt that, once successful, thousands of others would have rallied upon them. We were thus made fully aware that, but for the precautions, similar massacres to those at Delhi and Meerut would have been here enacted.

Now all precautions have been taken. The officers wives and children have been sent off to the fort and those of our regiment and the artillery put into a central bungalow which is guarded night and day by the Foot Artillery who have been armed with muskets. They were on the disarming parade but had no guns or even muskets, though there were plenty of spare rifles in our stores belonging to the men who died of cholera last year. Everybody is healthy, though the continual standing to arms and day and night patrols are very harassing, and we are all inspired by the example of our Brigadier who is everything to be desired, though he joined the army as far back as 1819. But he is not now in command, having been superseded by General Gowan a very sleepy looking old gentleman.

Now may we ask, what about the British soldier? He who was considered by the sepoy worshippers as a sottish, blackguardly ruffian quite unfit for any decent society. Once again, has the time come when the unflinching valour of this drunken brute will be appreciated; and now must the worth be felt of these scoundrels who know no fear and are as ready to rush to the mouth of the cannon as to that of the rum bottle. Notwithstanding all the vaunting reliance on the sepoy, these despised English soldiers must now be your saviours and the avengers of the slaughtered men women and children, for whose deaths the sepoy will answer with every drop of his blood. They who survive our bayonets and bullets must be blown from guns or hung from the gallows.

Apropos of the gallows. On the 10th instant, we were paraded to see the execution of eleven prisoners condemned by a court-martial.

The gallows had been erected opposite the lines of the 16th Native Infantry and the prisoners, all heavily ironed, were marched beneath it. But it was all a mockery, for the gallows would not have supported 11 cats, let alone eleven big men, and there was no hangman present. Even the prisoners smiled sardonically at what they saw was an empty flourish. They were marched back and reprieved by our new General who, everybody says, is far too lenient and very different to our Brigadier in every way.

This morning we sent a company and a firing party to bury the sergeant major of the 26th Native Infantry, an old man of about 70, who died yesterday of sunstroke. He was very well liked by the sepoys, apparently, for a great number followed the body right up to the gate of the cemetery."

Comment on the extreme age of the European and Indian officers of the East India Company is frequent enough in accounts of the Mutiny. The same rule prevailed in the case of the European N.C.O's. for the inscription on the tomb of Sergeant Major Robert Campbell of the 26th Native Infantry states that he died at the age of sixty-seven having served the company for fifty eight years. The same inscription states that he left six daughters, fourteen grandchildren and fifty-two great grandchildren living and, quaintly enough, concludes—"Erected by his widow in token of her gratitude." The next letter is dated the 6th of August and reads :—

"DEAR MR. GREGORY,

The disarmed 26th Native Infantry broke out into open mutiny on the 31st, about noon. Hearing of a great disturbance in their lines, the Commanding Officer, Major Spencer, with his Quartermaster Sergeant and some native N.C.O's., went into the lines to see what was the matter. They were all attacked and killed, Major Spencer being struck down by an axe from behind and the Quartermaster Sergeant, the Havildar Major and a pay Havildar were killed with swords and clubs. One officer (Young) who went to their assistance was slightly wounded before he escaped. You may be unable to understand how, in the face of five companies of British Infantry and two whole batteries of Horse Artillery, the mutineers of the 26th managed to get away almost unscathed. It was purely due to indecision and incompetence on the part of those in authority, though they say their hands were tied by the General. As usual, the 26th fell in by companies for roll call and,

after they had fallen out, commenced the row which ended in the death of their Major and the others. Though the General knew of the murders, he would not allow the main guard, which was composed of forty men of ours under a sergeant, to fire on the mutineers as they ran past, though they begged to be allowed to do so. As soon as he could make up his mind, the artillery were permitted to fire on the empty lines which they knocked to pieces, making such a dust that most of the few who remained got away under its cover. A few who had eaten so much curry and chuppaties that they were unable, or too old, to run, were blown to bits. But you may ask, where was the Brigadier of whom you have boasted so much? Oh: he was there alright, looking daggers, blunderbusses, shrapnell shell and fixed bayonets. Some say that they heard him say "Oh! G.E. why don't you let me loose"! though who and what he meant seems to be a mystery, unless the General has put a gag on him.

After a time they put some of our men on the limbers and went off after the sepoys with small result. Corporal Mullens of our regiment was killed by falling off a limber and the gun going over him. However, those poor sepoys have fallen in with an unfettered person who put an effectual end to the lot of them with a great smell of gunpowder. They must have been sorry they did not remain in Meean Meer under the fostering care of their guardian. We are in hopes that the others will rise and give us a chance at them, but they must be waiting for a chance to murder their officers first. Our Brigadier rides through their lines every day with a "Who'll knock off my hat"? look on his face. But they won't meddle with him because he might kick off the trammels and seriously hurt some of them as he did, some he blew from guns this morning. Their fragments are still lying on the parade ground with the pigs, the crows and the dogs disputing over the titbits."

The next letter we quote is from Gunner Marston of the Horse Artillery.

9th August, 1857.

DEAR MR. GREGORY,

I can assure you that the matter of the escape of the 26th mutineers, after murdering their major and sergeant major (sic), is a matter of great vexation to all the troops, especially the artillery who were most stupidly mismanaged by all in authority. Though from the

time of the alarm until we were in the saddle and limbered up was only about five minutes, we stood idle for quite half an hour before any one could find resolution to order an advance. Indeed, had it not been for an infantry officer who brought some men to be put on the guns, we might never have moved. When we did we went off at a gallop and here again was displayed the most lamentable stupidity and indecision. At one time we were madly galloping over the plain, then towards Shalimar or Lahore, until it struck someone that there might still be some sepoy left in the 26th Lines. On this wise hint we galloped off there and sent dozens of shots into almost empty huts until stopped by our worthy old brigadier. I don't think he could have known the actual condition of the ammunition of our troop, which is made up by the native factotum of the battery commander, who is naick, munshi, paymaster, head lascar, mistri and general contractor. Without this fellow nothing can be done ! We had not a single fuse ready for use, and anyone who knows the labour and skill requisite to bore fuses will know that it cannot be done under fire.

We have taken on ourselves to go into the magazine and examine the ammunition there and with the guns. We found almost all the common shell deficient in the full bursting charges, some even having none at all, and that most of the shrapnell was deficient of half the bullets or more. It was a good thing we were not required to fire on the sepoy at the time of disarmament for we are convinced that most of our shrapnell would have done them little harm. All that was reliable was the round shot which would have been of little use."

By the time Major Spencer and the others were murdered there were only about six hundred and eighty of the 26th Native Infantry left, over three hundred having quietly trickled away since the disarmament. Most of those left went away that morning, leaving only about two hundred in the lines at the time of the outbreak. Apparently they rejoined after getting away from Mian Mir, for over five hundred were intercepted by a small party of police and levies under Frederick Cooper, Commissioner of Amritsar, by whom they were shot to death in parties of ten at a time. By night there were still one hundred and twenty left, all of whom were packed in a small room in the Fort of Ajnala where most of them were suffocated during the night. The survivors were also shot.

Mr. Cooper's report exists in the Punjab archives and was also published by himself a few years later. The horrible details of this mass execution are related with such a ghoulish relish that one is forced to the conclusion that he must have had a mental kink. So thought Sir John Lawrence who, in commenting, remarked that however much the executions were justified, the manner of reporting them was certainly not. Those who escaped in other directions were gradually hunted down and in the end death overtook nearly every man of the 26th Native Infantry.

SMOKY NOTES.

BY BRIGADIER W. D. CROFT, C.M.G., D.S.O.

The following are some notes based on personal experiences of the use of smoke in the Great War. Personal experiences are often misleading—and sometimes inaccurate—but they are better than nothing.

1. *Object*.—The object of using smoke in battle is to blind the enemy sufficiently to prevent him from knowing the direction or the exact time of the attack, and so deny him the full use of his weapons.

2. *Experiences*.—It is submitted that the man who first realised the possibilities of smoke was Major General Tudor who was appointed C. R. A. 9th (Scottish) Division at the beginning of 1916. The writer was then a battalion commander and the division was fortunate enough to be commanded by Sir William Furse, another gunner. Tudor was as full of ideas as an egg of meat and we all thought him the best gunner in Europe—British, French or German. He and Furse put their heads together and soon began to study the application of smoke. At the end of 1916 Furse went to the War Office as M. G. O. and during 1917 the 9th Division got all the smoke it wanted—and it wanted a lot.

Tudor acted as instructor to the whole division, and it was not at all an uncommon thing for a battalion commander to be allowed to shoot a battery during the afternoon in a quiet part of the line.

Consequently the senior infantry commanders were “*au fait*” with all Tudor’s ideas which reached a climax in the great 9th Division triumph just north of the Scarpe at the battle of Arras, 9th April, 1917. On that day smoke was used generously on two occasions :

(a) To stiffen up the normal H. E. creeping barrage—the 9th Division would not have shrapnel for obvious reasons—as the first objective completely overlooked the assembly and the advance of the attackers.

The attack was launched in a “quarter light,” and the men being over-eager with nerves on edge, overran the barrage. As a result their respect for smoke shell as an added horror of modern battle was greatly increased ; it was terrible stuff to burn, and the glowing phosphorous balls in that twilight were most demoralizing.

This experience confirmed the lesson that smoke must not be allowed near our own infantry.

(b) Much later on in the day the division had started for its third objective—The Point du Jour. To our immediate rear a fierce battle was raging, and there was many an anxious glance over our right shoulders. Tudor had most of his guns on the move, but, quickly sizing up the situation—the 15th Division, attacking south of the river Scarpe, had been held up by a series of works called the ‘Triangle’—brought his guns into action, and put down a ‘pillar’ of smoke which floated down the river and completely blotted out the enemy’s view of our advance and, still more important, of our exposed right flank. Incidentally it did more than that: for the Germans holding the ‘Triangle’, taking it for a gas cloud, abandoned the ‘Triangle’, and so allowed the other Scottish Division to get on. After making due allowances for the wind being right, it would appear that much credit is due to Tudor for not only sizing up the situation, but applying his principles so neatly.

Smoke was used, when considered *necessary*, whenever the 9th Division attacked. On one occasion, the attack on Greenland Hill by the 9th and 34th Divisions on 4th June, it was not used as the ground was dusty enough to give a good screen with H. E., a point to remember in this dry and dusty country on occasions.

All through the summer the gunners had constant practice in its application on quiet fronts.

In the 3rd battle of Ypres on 20th September 1917, smoke was used in a most successful battle, and on the 12th October, when trying to wade through that cesspool below Passchendaele ridge, the German O. P.’s overlooking the battle were effectively blinded.

But by the end of 1917 other divisions were shouting for this saver, and by 1918 it was becoming increasingly difficult to obtain in spite of the efforts of Furse and Churchill.

Therefore Tudor began to experiment with the ‘wisp’—just sufficient to blind O. P.’s, and it was used most efficiently and economically, from screening daylight patrols to battalion day raids.

In 1918 in those long drawn out battles for the retention of Wytschaete ridge, the 7th Seaforths attacked on one occasion under a smoke creeping barrage, practically all smoke. Unfortunately, owing to a misunderstanding, the French on our right flank did not advance,

and the Seaforths, who had captured the village most gallantly, had to come back. It was reported that the German casualties were heavy from the smoke—and our men ran into it too. It would seem that there is no exception to that golden rule: keep the smoke well clear of our infantry.

In June 1918 the 9th Division captured Meteren, the success of the operation being largely due to the use of smoke. Officer prisoners who had been manning their O. P.'s assured us that they fully expected us to attack from the west, and that, owing to the smoke from the west, they had no idea until the men were upon them that we launched the infantry from the north.

This success had a most demoralizing effect on the Germans, as proved by a German Directive issued to the Army after the battle, and captured a month later (the Directive is in the writer's possession) in which it stated quite frankly that the defenders had been completely surprised, and also that there was no answer to it. That was proved a month later in the attack on Hooganacker ridge.

During the war of movement from September to the Armistice, smoke was used in a greater or lesser degree in every attack of the 9th Division, the principle being to blind the enemy as to the direction and time of the attack, thereby producing surprise and success.

Two notable instances were the attacks by the Lowland Brigade, at Lager Capelle Wood and Vichté.

Lager Capelle was a horseshoe-shaped hill with the bars facing the attackers. On the previous afternoon the Highland Brigade with very little artillery support, had failed to capture the hill. Next morning the inside of the horseshoe and the right bar was thoroughly smoked and in the low ground comprising the inside of the shoe there was a regular witch's cauldron of smoke; the Germans usually attacked, it may be remembered, on low ground and in this case they evidently expected our attack there too; they were disappointed.

As soon as the smoke was well down one battalion raced along the left bar, supported by a second battalion, and fairly surprised the Germans, a very good example of the success attending mobility.

Vichté was a village on the railway; as our assembly position was astride this railway, it served as an excellent guide to the infantry in spite of the village being blotted out to all appearances by smoke.

The attackers' side of the village was stiff with machine-guns and, adopting mobility tactics, the attacking battalion raced down the permanent-way into the village with hardly any casualties as the German machine-gunners, being blinded, were ignorant of the time of the attack, although they knew the direction, and so could not keep their buttons pressed indefinitely.

3. *Lessons Learnt*.—It will have been noted that when the principle of our infantry avoiding contact with smoke was violated, the infantry got into trouble, and yet we never seemed to learn the lesson. This is not a perfect world.

Whenever our infantry will be called upon to assault, that infantry will have to face a defence largely dependent on its machine gun framework: and it is against this most formidable man-killer that smoke may help, if properly applied.

The very successful use of the surprise factor will have been evident in some of the examples quoted above. By the aid of smoke we cannot only leave the enemy guessing as to the time and direction of the attack, but also bluff him into thinking that the attack is launched, thereby inducing him to indulge in a vast waste of ammunition since the infantry have not moved.

It is a most surprising fact that when once the cry of 'Wolf' has been tried, the defender can be induced to believe that the real thing is not going to happen; it almost seems as if the wish is father to the thought.

These "Chinese" attacks—a full dress attack with the infantry absent—were often tried by the 9th Division; and it was significant that when the real attack came the enemy were surprised, evidently lulled into a sense of security by the non-arrival of the one factor which crowns all fire plans.

The critic who has taken the trouble to wade through as far as this, will no doubt retort that in moving war we shall have no time for such bluffing. But it is submitted that to attack, say, after an hour's preparation with the enemy thoroughly alive to what is going to happen, will spell failure against a stout-hearted enemy, as was proved by many grisly examples in the Great War; and by the time the mess of failure has been put right there would have been ample time to surprise and mystify, the result being success at the cost of few casualties.

4. *Summary and Conclusions.*

- (a) Always put down smoke well away from you and as close to the enemy as possible :
- (b) Always use it in the attack, never in the defence, and never go through it if possible :
- (c) Never use an ounce more than is absolutely necessary :
- (d) Well trained gunners will put it down under any conditions of wind and weather ; but it must be remembered that the 9th Division had similar conditions for training to a permanent practice camp under ideal conditions with practically unlimited ammunition.

Finally, smoke may be called a good friend but a bad neighbour.

PROTECTION IN WOODED HILLS.

By MAJOR-GENERAL H. ROWAN-ROBINSON, C.B., C.M.G., D.S.O.

Much has been written on mountain warfare, much upon bush warfare, but nowhere can I find any treatise on fighting in a country where nature thrusts upon a column a combination of both the hill and the forest, although actually such a condition is by no means uncommon. It is a problem constantly encountered in Kurdistan; and the R. A. F. and the Iraqi army therefore have had considerable experience of it during the last four years. It differs from that of ordinary mountain warfare in that:—

- (1) The enemy can find covered approaches throughout the area.
- (2) The value of modern weapons is nullified.
- (3) No visual communication is possible.
- (4) The R. A. F. can afford but little assistance.

All these troubles are specially great when the trees are in leaf in the late spring, the summer and the early autumn—the period when operations generally take place. On the other hand, in such circumstances, the enemy loses the advantage of his long range and covering fire and, being ignorant of the methods of protection adopted by the column, may easily run into a trap.

The methods which experience suggests for dealing with the problem and which were to a great extent adopted in Kurdistan were as follows:—

(a) A clearing party should march with the advanced guard and, for the benefit of easy communication throughout the column, clear as wide a front as may be possible in the circumstances without seriously delaying progress. The width of the passage will vary from 20 to 100 yards according to the density of the scrub.

(b) The dangerous areas should be swept, say, to a depth of 400^x, by a company, companies or battalion (less machine guns).

(c) To prevent the enemy, after observing the sweep, from coming in behind it, the sweeping detachment must drop piquets from its outer flank.

The procedure under (b) and (c) resembles to some extent that adopted for the clearing and piquetting of a massif to one flank of a valley in ordinary mountain warfare.

(d) High points which give both command and view must be occupied.

(e) Small groups of men must be distributed throughout the whole length of the column, ready instantly to repel any attack.

(f) When the country is very close and difficult, advances must be made by bounds; and short marches are advisable except where long distances have to be traversed to reach water. It will often be necessary for the commander to settle the limits of his bound by a close air-reconnaissance.

Piquetting in the bush is a thorny subject in more ways than one. Where visual communication is feasible as will always be the case over a part (generally the larger part) of the route, the matter is relatively simple. The trouble arises where piquets are hidden from each other, from the control point and from the column, as is usually the case with those dropped by the sweeping detachment. What arrangements will ensure that these piquets afford protection to the column, are controlled, can be supported and can be withdrawn? As in all other matters connected with the subject, the density of the scrub is a determining factor in the solution of these questions.

As regards protection, piquets should be placed on all important approaches; or, if approaches are of equal value, then so close together that the enemy group should be unable to penetrate unheard between adjacent piquets. They should remain hidden and should not move or speak. Their strength may therefore be small—a rifle section—for they should compensate for weakness by surprise. An enemy endeavouring to attack a column would normally strike a piquet in ambush, and after one or two experiences of that nature, would be very chary about repeating his attempt. Should, on the other hand, hostile groups be lucky enough to pass unseen and unheard between two piquets and attack the column, they could hardly get back unscathed.

Control, support and withdrawal would be effected under company (in small forces—platoon) arrangement, company headquarters being kept in touch with platoons and the latter with their piquets, which will normally not be more than 200 yards from the track-clearance, by means of telephones or of runners guided by the blazing of trees. Runners should be grudgingly used, however; for, in principle, all movement should be enemy movement.

The system is slow, expensive in men, and complicated and that is why, when large areas have to be treated in this manner, the advance must be executed by bounds, the column being closed right up and piquets withdrawn, within the limits set by safety, at the end of each bound. Careful reconnaissance and careful organization based on that reconnaissance are necessary at the commencement of each bound.

It is quite possible that methods differing from those indicated above have been tried out elsewhere and have proved successful. If so, it would be interesting to hear what they were.

COMPENSATION DUTY.

BY LIEUT.-COL. C. CAMPBELL.

Introduction.

It is now more than five years since manœuvres on a grand scale were held in India. The time, therefore, when they are likely to be held again cannot be far distant. On grand manœuvres a number of officers are always detailed as Military Compensation Officers. Their main duties are to see that (a) the cultivator does not suffer undue loss owing to the manœuvres and (b) that the Army does not suffer financially through claims for damage which is not due to the manœuvres. These duties sound simple enough, but in cases where the manœuvre area is extensive, with claims for compensation running into many hundreds, involving thousands of rupees, some special knowledge and organisation are required on the part of Compensation Officers to ensure that the work is efficiently and economically done.

Information as to how to set about compensation duty is not easy to come by, as the regulations on the subject do not go into much detail, and there are now few senior officers on the active list of the Indian Army who have had experience of the work on a large scale, to whom one can turn for guidance. These notes embody some of the experience gained by the writer when acting as a sub-area Compensation Officer during the Army manœuvres held in the Punjab in 1928, and it is hoped that they may be of some assistance to officers detailed for this duty in the future.

Preliminaries.

An officer of the rank of lieutenant-colonel is usually selected as Chief Military Compensation Officer. One of his first duties will be to confer with the Deputy Commissioner in whose district the manœuvres are being held, and to settle with him the boundaries of the sub-areas into which the general manœuvre area is to be divided, and the compensation staff that will be required for each sub-area.

The boundaries of the sub-areas must be the civil boundaries, e.g., a *tehsil* boundary. This may result in sub-areas of unequal extent. That, however, matters less than the confusion likely to arise if a geographical feature, such as a *nullah*, were to be selected. In such a case one *zail* might be in two sub-areas, with the result that its civil officials would be at the beck and call of two compensation staffs.

For headquarters of sub-areas, a central situation, possibly at road junctions, should be selected. The staff required for each sub-area will of course depend on its size and the amount of crops it carries. Generally speaking, an officer of field rank, working directly under the orders of the Chief Military Compensation officer, with a Kings Indian commissioned officer as assistant, and two or three Indian officers will suffice. The latter should belong to the province in which the manœuvres are being held, and they should be efficient map readers and capable of writing a report. For all, one quality is essential, that is tact, for many questions will arise and perhaps not a few difficult people will have to be dealt with.

The Civil Compensation Staff usually consists of a Chief Civil Compensation officer, who may perhaps be an Extra-Assistant Commissioner, and he works in co-operation with the Chief Military Compensation officer. Civil assistants are detailed to each sub-area. These may be of the rank of *Naib-Tehsildar*. They work in co-operation with the Military Compensation officers of the sub-areas.

Some two or three weeks before the manœuvres are due to commence, the Compensation Staff should be assembled at the headquarters of the Civil district concerned. The Deputy Commissioner will probably make an announcement as to the manœuvres at a special *darbar*, so that all concerned may know the arrangements under which compensation for damage will be paid, and the rates of the same, etc. This occasion also affords an excellent opportunity for the civil and Military Compensation Staffs to meet. On the conclusion of such preliminaries, under orders from the Chief Military Compensation officer, sub-area officers proceed to their headquarters.

Reconnaissance of Sub-Areas.

The object of this is to enable the military staffs to acquire a detailed knowledge of the geography of their sub-areas, and of the crops they carry, and also to give them the opportunity of gaining personal touch with as many as possible of the subordinate civil officials with whom they are likely to have dealings in the weeks to follow.

The sub-area Compensation officer should reconnoitre his area to a definite programme arranged in co-operation with his civil Compensation officer. At various villages during the tour, arrangements will be made to meet the principal *zemin-dars*. The Military Compensation officer should, among other points, explain that (a) troops receive

instructions to do as little damage as possible to the crops; that (b) if the *zemindars* are not satisfied with the amount of immediate compensation offered them, they must wait for a fresh assessment of the damage at harvest time. The *zemindars* should also be reminded to submit their claims for compensation through the proper channel, as laid down by the Deputy Commissioner, and not to go grumbling to generals about damage their crops may have sustained.

The Military Compensation officer should take the opportunity which this period offers of acquiring all the knowledge he can of such matters as the rotation of the crops, and the books kept by the *patwaris*. On the manœuvres in the Northern Command in 1928, several fallow fields were taken over by the Army as a landing ground. The *zemindars* concerned put in a claim for more than a thousand rupees, being the value of the crop which they said they would have raised had they not been prevented from cultivating the fields. An examination of the *patwaris'* books, however, showed that these fields were due, according to the rotation of the crops, to lie fallow that winter. Their claim for compensation could, therefore, be turned down.

The Military Compensation officer should also know the various terms used in the measurement of land, *e.g.*, *canal*, *marla*, etc., and he should be able to recognise the various kinds of soil, *e.g.*, *chahiye*, watered from a well; *barani*, dependent on rain, as there is a considerable difference in the value of the crops raised on these soils. If he remains in ignorance of such elementary matters as these, it is certain that the *zemindar* will score and army funds lose over most of the deals.

The detailed reconnaissance of the sub-area can safely be handed over to the Indian officers. They should be given orders daily to tour portions of the sub-area, *e.g.*, certain squares on the ordnance map. Where crops exist, these should be shaded on the map in green. They should also be told to note the condition of the crops, of the country roads, of the wells, etc. This is to ensure that compensation will not be paid for damage which is not directly due to the manœuvres. It is important that they should meet as many as possible of the minor civil officials of the sub-area, *e.g.*, *zaildars*, *tehsildars*, *patwaris*, etc., for a close liaison established between them at this stage will greatly facilitate the speedy and satisfactory settlement of claims later on.

There is little that the Compensation Staff can do while the manœuvres are actually in progress, except to take note of where

most damage occurs. It will be found that this is caused chiefly by mounted troops, artillery and possibly transport, and that damage will be extensive only when the ground has become soft as a result of rain, or irrigation.

Checking and Settlement of Claims.

At the conclusion of the manœuvres, when troops are clear of the area, the Civil Compensation officer prepares the claim. It will probably take some days to complete and when ready is presented in a consolidated form by villages to the Military Compensation officer of the sub-area. Before making any plans to deal with the claim, the Military Compensation officer, in company with his staff and the *patwaris* concerned, should visit certain selected areas where damage of both major and minor importance has occurred and for which compensation has been claimed. The selected areas can be identified from the *patwari's* map on which all fields are marked with a number. It is important first of all to investigate how the *patwari* arrived at the amount of the claim in question. More often than not, his method will be found to be as follows: The damaged crop under survey is, say, one *canal* of young wheat on *barani* soil, and over this area perhaps a troop of cavalry have ridden once. The fixed rate of compensation to be paid for the total loss of the wheat crop on one *canal* is, say, eight rupees, so he puts down a claim for this amount in full.

The question which the Military Compensation Officer should ask himself are, what proportion of this crop will not ripen as a result of the damage it has suffered? What will be the crop look like at harvest time? If he can visualise it more or less correctly he will be in a position to make a fair offer of immediate compensation to the *zemindar* concerned. In this particular instance it would amount to a very small proportion of the amount claimed. It is suggested that dealing collectively in this way with a few claims of a different nature will assist the Compensation Staff when working individually to assess damage and check claims in a more or less uniform method. Vague and haphazard guesses at the amount to be offered should be avoided.

The Chief Military Compensation officer in conjunction with the Civil Authorities fixes a date by which all claims are to be settled. The Sub-Area officer makes out his tour programme accordingly, arranging to visit the chief villages in turn to settle claims. The claims may run to many hundreds, in which case it will be impossible to check them all. Most of the major damage should, however, be

seen and checked by some member of the Military Compensation Staff. It is essential that some of the claims prepared by every *patwari* concerned be checked, as otherwise it will be impossible to gauge even approximately the accuracy of the remaining claims for which some compensation will have to be paid, but which cannot for lack of time be seen and checked by a member of the Military Staff. In most instances the *zemindar* greatly exaggerates the amount of damage that his crops have suffered, and in this attitude his village *patwari* will be found to give him a hearty backing. The *zemindar*, however, looks to the British officer for a fair deal, and although due economy of army funds must be remembered, there is no merit to be gained by trying to do compensation "on the cheap." On the manœuvres of 1928, in the writer's sub-area (approximately thirty miles long by ten miles broad) about thirteen hundred claims, amounting to more than ten thousand rupees, were settled by payments of immediate compensation of about four thousand rupees. These manœuvres were held after heavy rain, when the ground was soft and crops were easily damaged. The cultivators in every single instance preferred to take the cash payment rather than wait for a fresh assessment of the damage at harvest time.

When all claims have been settled the Military Compensation officer should obtain a certificate to that effect from the Civil Compensation officer before leaving his sub-area.

Miscellaneous Notes.

1. A diary, a cash account and an abstract showing claims serially numbered with the amounts paid in each case are kept by the Sub-Area Compensation officer. The Military Accounts Department require receipts in triplicate for all disbursements. This involves a good deal of clerical work.

2. It sometimes happens that brigade training is carried out on the army manœuvres area previous to the manœuvres. In such cases, to avoid the possibility of compensation being paid twice over for the same damage, an Indian Officer from the Sub-Area Compensation Staff should be detailed to act in co-operation with the Military Compensation officer of the brigade concerned, when the latter is settling claims.

3. Horses, or rather country ponies, are usually provided by the Civil Compensation Authorities for the Compensation Staff at fixed rates of hire.

4. The Civil Authorities will normally provide mounted men to deliver messages to the nearest Military Headquarters, that is to say, if the camp of the Compensation officer is not connected up to the neutral signal service.

5. In addition to the usual camp servants, two orderlies are required. The camp of the Sub-Area Compensation officer, more likely than not, will be "out in the blue," and he will probably have in his charge some thousands of rupees of government money, which will require guarding.

Conclusion.

To carry out compensation duty fairly and economically, it is essential therefore that (a) the Staff, both Military and Civil, be carefully selected, (b) that a good understanding be established and maintained between them, (c) that the manœuvres area be thoroughly reconnoitred and (d) that some uniform method of checking the civil claims be adopted.

The work, taking it as a whole, is pleasant to those who can find interest in the *zemindar*, his life, his fields, his crops. It is, however, somewhat exacting work especially during the days when claims are being settled, and British officers who may be detailed for this duty in the future should realise from the start that there is more in it than merely riding round the country-side with a bag of rupees, distributing them to any peasant who turns up with a grouse about his crops.

SKI-ING IN AUSTRIA.

(December 1933—January 1934).

BY COLONEL SACKVILLE HAMILTON, D.S.O. (late) R.E.,
SURVEY OF INDIA.

Ski-ing as a sport is annually increasing in popularity. This is largely due to the fact that, though to become really expert it is normally necessary to start in early youth, the average man and woman can become sufficiently good in a very few days to be able to enjoy themselves thoroughly.

But the information given in many of the articles published in the past year or so, particularly in reference to Austria, seems apt to lead those who may be considering a ski-ing holiday to a belief that a grand opportunity awaits them at a very cheap cost.

Replies received from Switzerland in 1933 led to the reluctant conclusion that a ski-ing project must probably be abandoned on the score of expense. Later a chance acquaintance brought the conversation to ski-ing and his experiences in Austria the previous winter. This finally resulted in arrival, on the 28th December 1933, at the Hotel Alpenrose, Zurs am Arlberg.

Ski-ing in Austria is undoubtedly cheaper than in Switzerland but nowhere, with the heavy costs of travel added, can it be said to be very cheap.

Having just returned to India it has been suggested that an account of my experiences may be of interest.

As a skier I am a novice.

It is to give those who may also be novices and may be considering such a holiday in Austria a basis on which to make a fair estimate of costs and to add to the information already available as to where to go and how to get there, what to take with a view to avoiding unnecessary expense and add to comfort, and what may be better obtained in the country, from the point of view of another novice, that this article has been written, in the hope that my experiences may assist and be of use and interest to others.

The first essential as to where to go and how to get there is a map.

The ski-map of Austria herewith has been prepared from an assortment of Austrian maps purchased at various towns and is intended to illustrate the context by shewing the positions of all places named.

From Buchs to Vienna Austria is studded with ski-ing resorts dotted over the mountain ranges.

Snow conditions are very reliable and ski-ing is in full swing from the middle of December until March and even May in the higher parts.

The majority of English people confine themselves to the Vorarlberg and Tyrol Provinces which lie at the west end of the Austrian Alps, probably on account of their being nearer Home.

The Tyrol forms a narrow strip of land approximately 160 miles long by an average of 40 miles wide.

The chief town Innsbruck lies very nearly in the centre; Kitzbühel lies near the north-east boundary. At the western end is St. Anton.

The Tyrol is easily accessible from all parts of Europe. Innsbruck is the point of intersection of the lines London-Paris-Basle-Buchs-Salzburg-Vienna; and Berlin-Munich-Rome.

Venice, almost due south from Innsbruck, *via* the Brenner Pass, is some 300 miles distant, Munich, due north, is but 120 miles.

If travelling from England the cheapest and quickest route is *via* Calais or Boulogne-Laon-Basle.

Leaving Victoria at 11 a.m. Innsbruck is reached at 1 p.m. next day and Kitzbühel at 3-30 p.m. All through trains stop at Bludenz Langen St. Anton-Landeck and Jenbach.

By far the most comfortable method is to take the above train from Victoria and travel to Paris arriving there at 6-10 p.m. and from thence by the 9-15 p.m. Arlberg-Orient express (*gare de l'est*) by 3rd class sleeper, a new innovation commenced this last season. Sheets, blankets and pillow; basin with h & c and a heater are provided. They run from Paris only, for 2 months from 20th December, and are taken off at Innsbruck. They run daily during this period, and should be booked well in advance through a Tourist Agency. The train from Calais is joined at Basle—and the time of arrival in Austria is the same by either route.

The return train from Austria leaves Kitzbühel at 3-30 p.m., Innsbruck 5 p.m., Langen 7 p.m. It bifurcates at Basle and the 3rd class sleeper arrives at Paris at 9 a.m. next morning.

Of those going to Austria many go to Kitzbühel for the whole holiday. Others, attracted by the advantages of a cable railway, gravitate there, or to some other similarly endowed resort, later.

Meals on trains are expensive; a luncheon basket, especially with the privacy of a sleeper, can reduce expenses considerably.

Information as to train times, fares, or any other details regarding travel is supplied on application to the Continental Enquiry Office at Victoria Station, the Austrian Federal Railways, Eros House, Piccadilly Circus, and all principal Tourist Agencies—see also Appendix I herewith.

It should be remembered that at Basle watches must be corrected to Central European time which differs from English or French time by one hour.

In travelling to Austria direct from India two routes are available, the one *via* the Ports of Italy and Venice to Innsbruck, the other *via* Marseilles and thence either *via* Lyons-Basle, or Paris-Basle.

By a new "P. & O." arrangement, 1st and 2nd class ticket holders, either from or to India, but *not* tourist class, who book all the way round *via* the Bay of Biscay, are, on declaring their wish *before* embarkation, issued with a free rail ticket of the equivalent class from Marseilles to London—or *vice versa*.

This valuable and attractive concession is available for one month from date of issue and for those breaking journey in either direction for a ski-ing holiday can be used to Paris or Lyons. Probably, if approached, the P. & O. Company for a small extra payment would issue tickets to London *via* Lyons-Basle-Laon.

Other than by air the time taken from Bombay to Innsbruck *via* "P. & O." and Marseilles is approximately 14½ days, and *via* Lloyd-Triestino and Venice 11½ days. This assumes no delay in train connections.

The Federal Railway system of Austria is electric throughout and is extremely smooth running.

Local railways extend wherever the terrain admits, and are augmented by cable railways in several places and by many motor and bus services.

One very important item to remember from the point of view of expense is that travel by ordinary train costs exactly half that of travel by mail trains. The extra time taken is of small account for short journeys.

There is no reduction for return rail tickets in Austria. Many keen skiers travel 3rd class there or in Switzerland.

All travellers on Austrian railways, whatever class, are entitled to use the restaurant car.

CURRENCY.

The unit of currency is the Austrian *schilling* which is divided into 100 *groschen*.

Any amount of any foreign currency may be taken into the country. This should be declared at the frontier and care taken that it is entered in your passport. The same, or smaller, amount may then be taken out of the country on leaving. Without such an entry no more than the equivalent of 500 Austrian *schillings* in foreign currency may be taken out, and in no case, whether entered in the passport or not, may more than 200 Austrian *schillings* in cash be taken.

At 28 Austrian *schillings* to the pound sterling one Austrian *schilling* may be taken as the equivalent of nine pence. Details of prices given herein with the abbreviation *sch.* for Austrian *schillings* and *gr.* for *groschen* are on this basis.

It should be noted that the rate given by an exchange bank which is to be found in all large towns or tourist centres—there is one at Zürs—is about 90 *groschen* per pound sterling more than allowed by a hotel bureau and quite a saving can be made on even a short stay by taking the trouble to find out and go to the former.

As a general rule hotel bills may be paid in Austrian money, or in any foreign currency, or by cheque.

PASSPORTS.

British subjects do not require a visa for entering Austria, but they must be in possession of a valid passport.

SKI-ING KIT AND EQUIPMENT.

As to provision of kit. Buy a ski-ing suit—and glare-glasses and possibly a ski-cap, with earflaps to let down over the ears in cold windy weather in England and *everything else* in Austria—either at Bludenz, if proceeding *via* Basle, or at Innsbruck, if proceeding *via* Venice. If *via* Basle one can get out and complete all purchases in ample time to catch the next train on to reach destination the same night. At Innsbruck one has to change trains in any case. This however is not to say that a ski-ing suit purchased in Austria is not just as serviceable as any other.

Men should be particularly careful not to forget to take tennis shirts with collar attached which can then be worn open at the neck.

The hire of skis and sticks at Zürs is 1-50 to 2-50 *sch.* per day according to quality and length. The normal rate of hire at nearly all other places is 1 *sch.* per day.

DOMESTIC COMFORT.

All hotels, *pensions*, "*gasthäuser*", and most private houses in which visitors would be likely to stay, are fitted with central heating. In hotels the public rooms are usually stuffy and oppressive but bedrooms are kept at a reasonable temperature which can be adjusted by the regulator and an open window.

Electric light is universal and good.

The majority of hotels, and many *pensions*, have basins with running hot and cold water fitted in the bedrooms, such rooms being more expensive than those without. This is not usual in *gasthäuser*, but may often be found in private apartments.

A bath towel of one's own will be found extremely useful.

As bedsheets are usually not wide enough take one of your own and also two blankets or rugs and a thin under blanket—all of which can be fitted in the holdall without adding to chargeable weight.

Photography is an expensive item, the charges at Kitzbühel being much the same as in England, but at Zürs about 30 per cent. more for developing and 50 per cent. for printing. The work is generally very well and carefully done.

Films are available everywhere—expensive in the higher or more remote ski-ing resorts but normal prices elsewhere.

Anyone wishing to play cards should not omit to take playing cards with them—for in Austria they cost 7 *sch.* (*i.e.*, over five English shillings) per pack.

English tobacco and cigarettes, except in the large towns, are generally very difficult to obtain, are expensive and not the desired brand. Austrian cigars and cigarettes are not pleasing to English taste, so take your own, and, if a pipe smoker, take pipe cleaners.

Both playing cards and tobacco must be declared to the customs, but reasonable quantities are allowed free.

Food throughout is good. For all meals taken in bedrooms 20 per cent. is usually added to the ordinary cost. Cold lunch to be taken out is provided everywhere without extra charge. The water is excellent and can be drunk everywhere with perfect safety.

The universal minimum charge for afternoon tea at hotels, *gasthäuser*, restaurants, cafés or elsewhere was 1.80 *sch.* per person. So that it pays many times over to take English tea and a spirit stove with you ; if the latter is thought too much trouble arrangements can usually be made with someone in the village to provide boiling water.

As it may perhaps be of use to others, I give below an abstract cost in £. s.d. of exactly one month's holiday from England and return for two ; for I was accompanied by my son aged 10½ years. Children over 10 cost the same as a grown-up so there was no reduction on that account.

So far as the object—ski-ing—went we had everything we wanted and the holiday was an unqualified success.

Travel and living expenses—2 persons for one month, Dover—Zürs-Kitzbühel-Folkestone *via* Paris.

	£.	s.	d.
2 return tickets Dover—Langen 2nd class* to Paris			
and thence 3rd class sleeper	26	2	6
Sleeping car attendant (both ways)	0	8	0
2 supplements 1st class across Channel	0	10	0
Outward { Taxis, Porters, & registration skis	1	2	6
{ Food on journey (dinner at Paris)	1	10	0
{ Sledge—Langen to Zürs	0	13	6
Board and lodging, Zürs, 28/12 to 17/1 @ 18.50 <i>sch.</i>			
per person per diem, inclusive of tax, and service	27	15	0
Afternoon tea and drinks, same period	3	12	6
Ski-ing instruction at Zürs	2	10	0
One pair Ash skis with sticks	1	12	0
Occasional hire of skis and skins	1	15	0
Baths and laundry	1	13	0
Photography, stamps, picture postcards	2	3	0
Sundries	1	0	0
Transfer Zürs to Kitzbühel—sledge	0	9	6
Two 3rd class rail tickets Langen—Kitz	1	0	0
Porters and motor car to Hotel—Kitz	0	6	6
Board and lodging, Kitzbühel, 18/1 to 24/1 @ 16.50			
per diem including daily bath, tax, and service	7	5	0
Afternoon tea and drinks—same period	0	18	6
Photography and picture postcards	0	6	6
5 days cable railway (1 run each per day)	2	10	0
Homeward { Porterage Hotel to Kitzbühel R. S.	0	4	6
{ Railfare 3rd class to Langen	1	0	0
{ Taxis—Porters and registration—skis	1	6	0
{ Food on journey (including day at Innsbruck).. ..	1	15	0
Total	89	8	0

* At exchange rates of December, 1933.

Board and lodging inclusive of baths and washing for a stay of exactly 3 weeks at Züers worked out at £5 per week per person and for Kitzbühel at £4-10-0. For dancing add about 4 *sch.* per person per evening inclusive of drinks and incidental expenses.

The abstract of expenditure given shows some items which possibly others can do without but, if so, they will be certain to be replaced by others. Inclusive of afternoon tea and drinks, ski-ing instruction, and all other charges, the cost per person at Züers came to £7 per week. Züers is more expensive than other places. Five guineas a week "All-in" should be sufficient in smaller resorts, but where a cable railway exists the difference will soon be made up.

A reduction of from 25 to 30 shillings a week can be made on the above by living in apartments, where available.

Practically all ski-ing resorts in the Tyrol have a doctor of some kind, but broken bones necessitate a journey to Innsbruck or Kitzbühel to ensure their being properly set.

INDIVIDUAL SKI-ING RESORTS.

Space forbids mention of all the places marked on the map of which notes have been made either from a personal visit and observation or from those residents or visitors who have had first hand knowledge of them.

I have therefore confined myself to remarks on the more important.

A list of hotels, *pensions* and *gasthäuser* and their *en pension* charges at the various resorts named is given in Appendix II. The daily rates quoted are exclusive of 10 per cent. for service, visitors tax, which varies from 30 *gr.* to 1 *sch.* per day and is usually included by hotels when giving terms, and baths.

In all cases afternoon tea is extra.

When occupying apartments the charges include morning rolls and coffee and arrangements can be made to include baths also. Lunch and dinner for which separate arrangements must be made at hotels or *gasthäuser* cost together from 7 to 9 *sch.* per day.

The list names only a few hotels and is to give intending skiers somewhere to go to start with.

Further information, if desired, as to these or other individual places can be obtained from the London Office of the Austrian Federal Railways in Piccadilly Circus.

THE ARLBERG.

The Arlberg District is the name given to the mountainous tract which, running north and south, divides Vorarlberg from the Tyrol. The Arlberg itself is a high Alpine pass beneath which, on the main line between Buchs and Innsbruck, runs the Arlberg tunnel, 6 miles in length, the most eastern of the five great tunnels through the Alps.

ZÜRS (5642 feet).

The station for Zürs is Langen situated at the west end of the Arlberg tunnel.

The distance from Langen to Zürs is $4\frac{1}{2}$ miles. Zürs is reached in 2 hours by sledge. The charge for the sledge, which takes 2 persons and their baggage, is 18 *sch.* for the upward and 12 *sch.* for the downward journey.

At the top of the "Flexenstrasse" pass (5798 feet), the Zürs valley, well over a mile in length by about $\frac{1}{2}$ a mile wide, suddenly opens out to view. And the view to the novice, when the season is in full swing is surprising; for the slopes from one end of the valley to the other are covered by row after row, each of some dozen or more people, lined up under instruction totalling four or five hundred persons.

The hotels at Zürs are the Alpenrose, Lorunser, Flezen and Edelweiss, recommended in that order. Practically no other accommodation is available.

The Alpenrose is undoubtedly the best hotel, and has accommodation for 240 people in 165 bedrooms. Other hotels can accommodate about 250 between them.

Zürs possesses two great attractions. The one, which many may consider an unnecessary adjunct but which undoubtedly adds considerably to the gaiety and enjoyment of the young, is the Dance Band. It is the most original, entertaining, imaginative and lively band possible and, if transported to London, could not help making a fortune.

The other attraction at Zürs, now world famed, is the Schneider ski-school, an off-shoot of the Hannes-Schneider school at St. Anton, run by his brother Frederick.

There is yet a third brother. All are perfect masters of the ski.

There are ten classes of instruction from the most advanced to the lowest.

Each class is further sub-divided into groups with English, French or German speaking instructors according to the numbers attending.

Each period of instruction lasts 2 hours *viz.* from 10 to 12 in the mornings and from 2 to 4 in the afternoons.

The trouble taken and the patience displayed by each and every instructor is amazing.

New comers are tested and placed in class accordingly. Herr Frederick Schneider himself visits each class daily and on test passes pupils from one class to the next.

The two senior classes spend a great deal of the time on tour under advanced instruction and are also given *slalom* practice. Other of the less junior classes are taken out on tour according to progress.

The charges for instruction are moderate. Each lesson costs 2.50 *sch.* Books of 12 tickets can be bought from various notified places for 30 *sch.* and one ticket is handed to the instructor at the end of each lesson.

Short tours by class are paid for in a similar way by ticket—if an all day tour two tickets are given up.

It is not incumbent on those under instruction to attend every class, but for the best progress it is advisable to attend 5 or 6 a week.

Private tours organised in parties with a guide in attendance are somewhat expensive, the minimum number of persons in the party for which a guide will be spared from his normal instructional duties being 8 at 6 *sch.* each, or, if less than 8 persons, a minimum charge of 48 *sch.*

The fee for a privately hired instructor over a period, when available, is 25 *sch.* per diem and he may not take more than 4 people on tour or expedition.

The Zürs valley is enclosed by high mountains with steep slopes on both sides and is primarily suited to schooling. There are half a dozen short tours requiring one to two hours climbing well suited to the novice, while for the more experienced there are others more difficult and of longer duration.

LECH (4,747 FEET).

4 miles further north down the valley from Zürs.

The practice slopes are not extensive and being situated along the river of the same name, more climbing is required for tours than if a higher resort is selected.

OBERLECH (5,540 FEET).

Oberlech is reached by horse sledge from Langen in $3\frac{1}{2}$ hours—charge 27 *sch.* with an additional charge of 4 *sch.* for luggage which goes up the 800 feet from Lech on a rope-way.

The Goldenerberg Hotel can put up 50 people.

The ski-ing grounds are truly wonderful and give great scope for variety over an area some 2 miles across.

Any skier can climb anywhere in this area up to 2,000 feet above the hotel in perfect safety without a guide and on the return journey, finish with a christi outside the hotel door, a convenience pertaining to very few places.

The Goldenerberg ski-ing area, being well up on the south and east slopes of the Mohnenflüh (8,356 feet), catches every ray of sunshine from dawn to dusk. It is a beautiful setting and well worth a visit. There is excellent instruction at the same charges as at Zürs. The chief instructor Harrer is one of the champion ski-racers of Austria.

At the time of my visit there were very few English people at the hotel and any such contemplating a stay would be well advised to go in a party of 8 or 10 for whom all hotel managers throughout Austria are prepared to accept reduced terms. There is no dancing.

ST. ANTON (4,278 FEET).

Retracing our steps southwards we come to St. Anton, the Headquarters of the famous Hannes—Schneider Ski-School, situated at the eastern end of the Arlberg Tunnel.

The Hotel Post is the chief hotel, comfortable and rather expensive.

There are of course other and cheaper places at which to live.

As regards the ski-school all that has been said of the Schneider School at Zürs also applies here.

Though good tours, demanding varying grades of skill, are available, St. Anton is essentially a centre of instruction. But the practice slopes are poor compared with other places *e.g.* Zürs and Oberlech and the elevation being low, snow is not always assured, at any rate before the end of January. Frequently it is necessary to go up to

St. Christoph 3 miles distant either by motor bus or motor sleigh which adds considerably to the expense. Personally I do not recommend it.

ST. CHRISTOPH (5,900 feet).

Is worth a visit for a day or two but is not worth a prolonged stay.

GALTUR (4,249 feet).

To reach Galtur, one must disembark either at Landeck, if by mail, or at Wiesberg if travelling by slow train.

Thence either by private or post motor car or by horse sledge, the latter taking $2\frac{1}{2}$ hours, over a distance of just under 20 miles.

I am told that though Galtur is a fine halting place for a few days on the way through to Switzerland, yet the slopes generally are rather too steep for the average beginner.

SERFAUS (4,682 feet).

Serfaus is also reached from Landeck ; about 12 miles by bus to Tschuppach on the Upper Inn where one changes to a horse sledge and so up the hill, total journey about 2 hours ; cost bus, 6 *sch.*, sledge 8—total 14 *sch.*

Places at which to stay are the *gasthof* Schwarzer Adler or Alpen *gasthof* Furgler ; there are others, or apartments if preferred. But that specially recommended by a friend, after many visits, is Kölner *Haus* at Komperdell (6,500 feet), $1\frac{1}{2}$ hours further up the hill past the main village, which can take some 70 people.

Instruction is, as elsewhere, by state certificated ski-trainers and guides.

There are some 30 different tours for the longer of which huts are provided at all convenient sites *en-route*.

Serfaus, enjoying all the available hours of sunshine, is a virtual skiers' paradise and is given up to that pursuit only ; there is no skating.

Though fairly easy to reach it is not yet so well known or so well developed as some other places, and is consequently considerably cheaper. There is no dancing, and dinner jackets are unnecessary.

VENT (5,700 feet) ; OBER-GURL (6,332 feet).

Some 16 miles nearer to Innsbruck from Landeck is Otztal (slow train) from where comfortable buses take one south up the Oetz valley

25 miles to Zwieselstein, from where either Vent or Ober-Gurgl are reached. The bus journey occupies 2 and the remainder 3 to 4 hours.

The glaciers and peaks of the Otztaler Alps, several of which are over 11,000 feet, that can be reached from either of these resorts *via* the many well placed huts are the highest and said by many to be the most beautiful mountains in the Tyrol.

Both at Vent and Ober-Gurgl the nursery slopes are good but the country on the whole is somewhat difficult for the beginner. For the expert nothing could be finer.

KUHTAI (6,000 feet).

Kematen is the station for Kuhtai; $\frac{3}{4}$ of an hour by motor from there to Gries in the Sellrain valley from whence the walk to Kuhtai, in winter an easy ascent on skis, takes about $3\frac{1}{2}$ hours, or can be done by horse-sledge if preferred, cost 20 *sch.* including baggage. If arriving by mail train to Innsbruck the journey by road motor to Gries takes $1\frac{1}{4}$ hours, cost about 20 *sch.* according to fortune; or by motor bus which will take oneself and one's kit at a quarter the cost. To go by road from Innsbruck however may necessitate a halt there for a night.

If desired luggage for Kuhtai can be booked in advance to the Hotel Grieblerhof, Gries, Sellrain.

At Kuhtai, situated between the Otz and Sellrain valleys, there is only the one *gasthaus*, a converted hunting-box, the Alpen *gasthaus*, Kuhtai, standing alone on the Pass. There is a post office, a ski workshop, and a ski-school (Arlberg method) with its attendant instructors and guides. In case of accidents—actual illness is rare amongst skiers—Innsbruck is close at hand.

No dancing, and dinner jackets are seldom seen.

Kuhtai offers good snow, long hours of sunshine, and is easy to reach. It is cheap.

Though there are the Hocheder (9,177 feet), Birchkogl (9,288 feet) and Zwolferkogel (9,820 feet) to climb, yet the expert may eventually feel somewhat confined and require longer tours.

But for the beginner who is prepared to climb for his fun it would be difficult to surpass it.

INNSBRUCK (1,890 feet).

Innsbruck is the centre for Tyrolese ski-ing resorts. Its setting, with the great Nordkette range towering above the city, is at once beautiful and arresting.

Daily ski tours in many directions can be done from Innsbruck if desired, but distances are far, time short and conveyances expensive.

Innsbruck has the second largest skating rink in Austria and provides all manner of amusements. Winter sports events, ski-joring, a bob-run, theatre, cinemas, concerts and dancing; but if you go to Austria to ski don't remain in Innsbruck.

GERLOS (4,504 feet).

Eastwards from Innsbruck in $\frac{3}{4}$ of an hour by slow train we reach Jenbach. From here a toy train takes one in 3 hours to Zell-am-Ziller due south and thence due east a 4-hour journey by horse-sledge to Gerlos—third class railfare about 4 *sch.* and sledge 15 *sch.* Total distance, Innsbruck to Gerlos—50 miles.

Hotels are the *Gasthäuser*, Gaspingerhof, the Oberwirth, the Alpenrose, or the Kroller.

The best thing to do is to stay a night in a hotel—obtain a list of apartments available and make your selection for bed and breakfast; thereafter dine at the Alpenrose where the food is better.

Though low, Gerlos, due to something to do with its position, is always assured of snow—and has long hours of sunshine.

There is a post and telegraph office, chemist and ski school.

The nursery slopes are good and the neighbourhood provides some marvellous ski tours many of which can be tackled by the less-advanced, though the return, as one reaches the village, is always through a wood and somewhat difficult. Gerlos is one of the cheaper places, quite suitable for a beginner and thoroughly to be recommended—no cable railway, no dancing and no frills—just ski-ing.

KITZBUHEL (2,640 feet).

An extremely picturesque Tyrolese town some 700 years old, Kitzbühel lies in a broad valley about the centre of the northern confines of the Kitzbühler Alps.

Contrary to popular imagination there are high Alps reaching up to 6,000 feet and more on all sides.

The climate is mild and extremely healthy. The snow conditions are exceptional and for some reason unexplained Kitzbühel has snow before other places of greater elevation.

The scenery is superb.

There are many hotels—*gasthäuser*—*pensions* and apartments. The hotel Weisses Rossel, Hotel Pension Thérèse, Hotel Reich, and the Pension Villa Licht are all to be recommended.

The two first named above hotels are conveniently situated near the centre of the town, a few minutes' walk from the practice slopes to which the last named is close by.

The Hotel Reich is in the main street and is where many of the younger generation assemble for the daily tea dance on completion of their ski-ing exertions; it specializes as a café of which there are also others.

Details of the cheaper *pensions*, *gasthäuser*, and apartments can be obtained from the *Reisebureau* in the main street.

If such accommodation be required the best course is to spend a night or more in one of the above hotels while searching for what is required and then transfer when found.

Kitzbühel possesses a hospital and an X-ray institute. There are doctors and dentists, chemists and hairdressers, and all the usual shops pertaining to a large town. The shops are good, and prices moderate. There is of course a ski school which, as at all other resorts, provides first class instructors. As elsewhere the hours of instruction are from 10 to 12 and 2 to 4, *i.e.*, 2 lessons per day at 2.50 *sch.* per lesson. The Arlberg method is taught throughout.

The practice (or nursery) slopes are on the south side of the town and are good, roomy and wide.

There are over 50 different ski-runs round about of all degrees of length and steepness.

If one wishes to ski cheaply, the slopes of the Kitzbühler Horn (6,555 feet), and the Korstein (6,309 feet), on the north provide ample choice for numerous expeditions, tours and daily runs including short climbs which can be done in an afternoon as well as all day excursions.

Several of these tours bring the skier straight back into Kitzbühel, whilst for those which take him further afield, the St. Johann-Kitzbühel section of the railway provides an easy return journey.

For these latter it would probably be advantageous, and undoubtedly cheaper, to move out of Kitzbühel to a previously selected *gasthaus* at some village along the railway, *e.g.*, Griesenau, Hoglern, or Steinbach.

But the crowning convenience of Kitzbühel for those who like to have their climbing done for them is its cable railway (the station is just next the practice slopes) which takes them up to the Hahnenkamm (5,550 feet), a prominent and precipitous ridge on the south side of the town, so called from its resemblance to a cockscomb when illuminated by the first rays of the rising sun.

From this point the skier can travel due south on more or less level ground to the Ehrenbachhöhe (5,922 feet), Pengelstein (6,365 feet), (one hour's further climb), Steinberg-Kegel (6,467 feet) (3 hours) and Kleiner Rettenstein (7,274 feet) yet further on again, from all of which wonderful runs are available—on the east down to a convenient valley and the village of Jochberg (2,986 feet) (among other terminations), whence motor buses run back to Kitzbühel, or on the west to yet another convenient valley and a similar service of motor buses.

The bus-fares vary according to distance but the average may be taken at 80 *gr.* per person.

The most popular runs for the novice, probably due to their being easier and lying full in the afternoon sun, are the Fleck, Ochsen, Kaiser, and Brunn Alps all of which lead down into the town of Kirchberg (2,800 feet) to the north-west in the above-mentioned valley.

In addition to a bus service Kirchberg is also served by a shuttle train service at half-hour intervals—fare 50 *gr.* which is quicker and more comfortable than the bus.

Except at the highest points of the main peaks all the 50 or more ski-runs are over safe ground and are devoid of danger from avalanches.

There are restaurants and huts at various convenient points all over the area where the skier can consume the contents of his nosebag or have a meal made ready and wash it down with the product of the local brewery or other beverage.

The cable car carries 14 people and their skis and the rate of transport at full pressure averages one person per minute so that it

behoves one to be in time. If not, a wait of 2 hours in a queue is not uncommon.

The first car starts up at 9 a.m. daily. The fare is 6.50 *sch.* for a single ticket or an "*abonnement*" containing 10 tickets, which are not transferable, for 50 *sch.*

Including the fare up, a drink at lunch, and the return fare by bus or shuttle train, the cost per run is the equivalent of 5 English shillings.

Those not using the cable railway can climb to the top in about 3 hours from the practice slopes.

In 1929 a fine ski-jump was constructed where international and other ski-jumping contests take place from time to time.

The skating rink is sufficiently large and the ice well kept. A good skating instructor is available and exhibitions are arranged at intervals, but the main interest is ski-ing.

Tobogganing—sleighing—and ski-joring are also available.

Those who wish can dance at one or other of the larger hotels on most evenings. Fancy dress balls are held at frequent intervals.

The devotee of bridge will find ample opportunity for play.

CONCLUSION.

The Arlberg ski-ing technique prevails throughout Austria. Excellent ski-instructors are immediately available at all resorts. The charges already stated are practically universal and are cheap for what one receives in return.

To the smaller and less known places it is best to go in a party as otherwise there is not much to do in the evenings which draw in so quickly in the winter months. By writing in advance considerable reductions can be obtained from all hotels for parties of 6 or more—the larger the party the greater the reduction—for a minimum stay of 3 or more weeks. There is an off-season from the 4th to 24th January when reductions are made to all whether singly or in parties who stay a full 3 weeks during that period—this off-season is said to be due to a lull between the Xmas holidays and the period when the snow begins to be at its best.

The best time for all winter sports is from the beginning of February until the end of March, though most places are sure of snow

before Christmas. Ski-ing can be continued into the middle of May at the higher elevations.

Keen skiers, whether novice or expert, would do well to provide themselves as soon as possible with a copy of the local ski-map.

The days on tour are those best remembered and the harder the climb or the run down, and the greater the exertion, the greater the pleasure in reflection. Thus the great ambition of the novice should be to learn quickly—break away from instruction and get out on tour as soon as possible. But, though it may be fun, just to fall down the hills anyhow is of no value. So pay attention to the teaching and work hard. On the other hand take it quietly and don't overdo it to start with. Except possibly once or twice a week 2 lessons a day is too strenuous. 5 or 6 lessons a week is sufficient and are usually best taken in the mornings allowing time for practice in the afternoons. Everywhere the instruction is rather too accurate and meticulous and with the object of qualifying himself to be fit to go out on tour the novice should learn to "christi" as soon he can reasonably do so—bearing in mind it does not pay to learn to run before one can walk. One golden rule always to be observed on tour is always to follow one's guide accurately. Failure to do so may result in the demise of the offender over a precipice.

All over Austria there is danger from avalanches after new snow—a good deal more so than in Switzerland. But warning notices are always posted in good time by those responsible.

To him who has never skied in Austria before, I would say go to Zürs for 10 or 14 days to begin with. He can be sure of snow from mid-December onwards—and there are slopes for all of every possible steepness. Zürs is I think the best of all for schooling, due in part to Herr Frederick Schneider and the better discipline, but also because the large numbers make for competition and more regular attendance at lessons than other places.

Zürs is a real centre of instruction and invaluable as giving the novice a true perspective and an idea of what he has to learn, but elsewhere the instruction is every bit as good by men just as well qualified to teach. So if he prefers to do so the novice can go elsewhere either straight away or later after an initiation as above.

Having completed some initial instruction at Zürs, a transfer to Oberlech is very easy and inexpensive and well worth going on to for

a week or more. Later, if time permits, a transfer to one of the 3 places named below increases one's experience and knowledge of the country.

The novice who prefers to start elsewhere than at Zürs or those who already have some knowledge of the art, should go to Serfaus (Komperdell)—Kuhtai—or Gerlos and stay there, or at some other resort where there is no cable railway, until they feel they've done enough climbing.

Then go to Kitzbühel for the finish of the holiday and enjoy its advantages.

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NOTE.—*Copies of this article, together with the map and an additional appendix on ski-ing kit and equipment, can be obtained on application to the author at Simla, price one rupee, or V. P. P., one rupee and six annas.*

APPENDIX I.

TABLE OF TRAIN FARES.

(At Exchange rates existing in February 1934).

2ND CLASS FARES, LONDON TO SWITZERLAND :—

Wengen ; single £5-15-2 ; return £11-11-6 ; sleeper £2-19-4 each way.

Davos ; single £7-7-0 ; return £12-12-9 ; sleeper £4-3-9 each way.

St. Cergue ; single £5-19-10 ; return £10-6-4 ; sleeper £3-4-7 each way.

Return tickets are available for 45 days.

2ND CLASS FARES, LONDON TO AUSTRIA :—

Via Calais—Laon—Basle—Buchs :—

St. Anton ; single, £7-17-11 ; return £13-18-5.

Innsbruck, Kitzbühel, Zell-am-See, Salzburg ; single £7-19-11 ; return £14-15-7.

Vienna ; single £10-12-1 ; return £19-19-0.

Fares *via* other routes are slightly less.

The Southampton—Havre route is useful for those living in the West of England.

Through 2nd class sleepers—Calais—Basle—Innsbruck run on Mondays, Wednesdays, and Fridays—cost per berth £2-18-5 each way.

First class fares are 33½ per cent. more than the above.

2nd class in France and 3rd class onwards can be combined.

Via Calais—Paris—Basle :—

Innsbruck ; Kitzbühel ; 2nd class to Paris and thence by 3rd class sleeper ; single £8-7-6 ; return £15-10-1.

The 3rd class fare, with second on steamer—Dover—Ostend—Munich—Innsbruck is ; single £5-8-1 ; return £10-16-2.

Return tickets are available for 60 days *via* Ostend, 45 days *via* Calais—Basle, and 30 days *via* Paris.

Children between 4 and 10 years travel at half fare ; if over 10 the full fare is charged.

2ND CLASS FARE, VENICE TO AUSTRIA :—

Innsbruck ; single £2-18-0 ; return £3-14-0, but this return concession is only granted after spending 6 days in Italy. The journey is *via* Verona and takes 11 hours.

2ND CLASS FARE, MARSEILLES TO AUSTRIA :—

Innsbruck, *via* Lyons—Basle ; single £7-7-0. The reduction on a return ticket is small and bounded by various troublesome conditions. The journey takes 21 hours.

RETURN STEAMSHIP FARES FROM AND TO BOMBAY FOR 1934 ARE :—

Via P. & O.—to Marseilles—1st class (off-season, any grade) £95-0-0 ; 2nd class : £65-0-0.

Via Lloyd—Triestino—to Venice—1st class, £86--0 ; 2nd class, £65-0-0.

APPENDIX II. LIST OF HOTELS.

Name of Ski-ing Resort.	Name of Hotel, Pension or Gasthaus.	Daily charges <i>en pension</i> per person.	Whether with fitted h & c in bed-rooms	Remarks.
		<i>Schillings.</i>		
Berwang	Hotel Singer	10—15	Yes	
Galtur	Hotel Alpenhaus Fluthorn	15—18	Yes	Several apartments 2.50 to 4 sch. per day.
	Gasthof Zeinisjoch	12—14	No	
Gargellen	Hotel Vergalden	17—20	Yes	
Gerlos	Gasthaus Gaspingerhof	10—12	No	Numerous apartments 1.50 to 2.50 sch. per day.
	„ Oberwith			
	„ Alpenrose	7—8	No	
	„ Krollner			
Innsbruck	Hotel Europa	18—27	Yes	
	„ Tyrol			
Kitzbühel	Hotel Weisses Rossel	13—18		Baths, 1.50 sch. or daily 10 sch. per week.
	„ Pension Theres	14—17		
	„ Reich	14—18	Yes	Many apartments available, 2.50 to 4 sch. per day.
	Pension Villa Licht	12—16		Details from Reisebureau.
	Grand Hotel	23—27		Baths, 2 sch.
	Cheaper <i>Gasthäuser</i> and <i>Pensions</i> .	9—13	No	
Kuhtai	Gasthof Alpengasthaus	9—10 (Nov.-Jan.) 10—12 (Feb.-April)	h & c in corridors	
Lech	Hotel Krone	12.50—14	No	Rooms in private houses 3 to 5 sch. per day.
Ober-Gurgl	Hotel Gurgl	13	Yes	
	„ Edelweiss	12		
Ober-lech	Goldenerberg Hotel	16	Yes	
St. Anton	Hotel Post	(12 in Annexe) 18.50—27	Lower charges without h & c	Add 2 sch. per day for heating.
	Gasthof Alpenrose	16—25		Daily bath, 15 sch. per week.
St. Christoph	Gasthof " Hospiz "	17—19	Yes	Private lodgings 4 to 6 sch. per day.
Serfaus	Gasthof Schwarzer Adler Alpengasthof Furgler	7—9	No	Apartments 2 to 3.50 sch. per day.
Serfaus (Komperdell)	Kolner Haus	9—14	h & c in corridors	
Stuben	Gasthof Post	10—12	No	
Vent	Hotel Vent	9—15	Yes	
Zell-am-See	Sporthotel Debzelter	10—17		Apartments also available.
	Hotel Excelsior			
Zürs	Cheaper <i>gasthäuser</i>	8—14	No	
	Hotel Alpenrose	18—22	Lower charges are without h & c	Baths, 3 sch. daily or 17.50 sch. per week.
	„ Lorinser			There is no private accommodation.
	„ Flexen	15—21		
	„ Edelweiss			

THE BATTLES OF GENERAL SAMSONOV'S ARMY ON THE 26TH, 27TH AND 28TH AUGUST 1914.

BY LIEUT.-GENERAL N. GOLOVINE, C.B.

We must now digress to describe the progress of events with the XVth Corps on the 28th August.

"An army order reached me late in the evening of the 27th August (I cannot remember the exact hour)," writes General Martos in his "Outline."¹ "The two corps were placed under my general command. This order clearly involved some mistake, as the XIIIth Corps was at Allenstein on the night 27th-28th August and consequently could not take part in the fighting on the morning of the 28th, as it would first have to complete a march of 30 versts.

"After issuing all necessary instructions to the troops, including orders to a brigade of the XIIIth Corps to turn the left flank of the enemy position, I yet could get no sleep, as I was seriously alarmed at the situation which so vividly depicted itself on the evening of the 27th August. It was plain to me that the Staff of the Army had corrected itself too late, and that any success that might have been attained on the morning of the 27th could not still be hoped for on the evening of the 28th, the more so, as the XIIIth Corps would be utterly exhausted after marching 60 versts in these two days. On the evening of the 27th I had received a report to the effect that the German cavalry had destroyed our telegraph line to Yanov at several points. I thought over the problem of withdrawing the corps, and the question appeared to me extremely difficult, although I still had one brigade in reserve."

"Towards midnight the firing had died down, but at 2 a.m. I remarked an increase in rifle fire, directed against a hollow on the left flank² of the fighting line of the corps."

"I realised at once that the Germans were trying to break through here, and therefore quickly transferred Novitsky's brigade (the general reserve of the corps) to the left flank, and was with it myself until sending it to attack. I also ordered the Inspector of Artillery to concentrate a howitzer group and the batteries nearest this flank for the bombardment of the hollow."

"My surmise turned out to be correct: at earliest dawn the Germans delivered a vigorous attack in the direction of the hollow, but were met by a hurricane fire from our artillery, whose shrapnel, and especially that of the howitzer group, mowed down whole ranks of their dense and ordered columns. The German infantry, having succeeded in breaking through along the hollow, were attacked by

¹ pp. 15, 16 "Outline of the operations of the XVth Army Corps in Eastern Prussia in 1914." Manuscript in the possession of the author.
At Waplitz. (Author's note).

Colonel Novitsky's brigade, the majority annihilated with the bayonet, and part taken prisoner (1 staff officer, 17 officers, and about 1,000 men). The break was mended by about 9 a. m.

"Not to weaken the ranks of the infantry, I sent mounted Cossacks to escort the prisoners out of the fighting line, and at about 10 a. m. the prisoners in column, with the officers at the head, marching as though on parade, reached the hill upon which I had stationed myself and my staff to issue instructions and observe the fighting. At this moment, to my surprise, General Samsonov having arrived from Neidenburg, reached this same hill, but from the other side, riding on horseback with his staff. While I was explaining the situation to the Army Commander, he interrupted me and, pointing to the German column, asked me what it was. I replied: 'Prisoners, captured in repelling an attack which penetrated our lines this morning.' He then reined his horse up against me, embraced me, and said sadly: 'You alone will save us.' This phrase struck me unfavourably. I knew only of Artamonov's retreat, and had been comforting myself with the thought that the army had received a new reserve, the 2nd Division having just been put into the line.¹ On further conversation it turned out that the army had only been reinforced by the Kegsholmsky Guards' Infantry Regiment, which, together with a brigade of the 6th Cavalry Division, was defending Neidenburg in face of the strong enemy forces advancing from the West after dealing with Artamonov.

"Here I think I should mention that the army cavalry, consisting of the 6th and 15th Cavalry Divisions, had given the Staff of the Army timely warning as to the movement of large German forces from the West in the direction of Hohenstein and Neidenburg. But this information had not been credited, but had been thought to be exaggerated in the extreme....

"It was clear that the situation demanded an immediate retreat on the part of the XIIIth and XVth Corps, and I stated this to General Samsonov in the presence of members of both staffs—Army and Corps. However, General Postovsky persuaded him to await the arrival of the XIIIth Corps, still hoping for victory.² Incidentally, this was already the third day of the XVth Corps battle, and whilst the enemy was growing stronger, by the evening of the 28th August the corps would have exhausted all its reserves, and in consequence of its heavy losses and the extreme exhaustion of the men had begun to get stale.

"About 3 p. m. a disorderly retreat of infantry on our right flank was observed from the hill upon which we were vainly awaiting the appearance of the XIIIth Corps. Following on this, arrived the

¹ General Martos apparently refers here to the units of the 2nd Infantry Division which had taken part in the attack against the 41st German Infantry Division, advancing from the direction of Frankenau.

² We think that in the given case General Postovsky, the Chief of Staff, having in view the local conditions, was rightly influenced by the consideration that it was impossible to leave to its fate the XIIIth Corps, coming up from Allenstein. (Author's note).

officer of the General Staff who had been sent by me to the brigade of the XIIIth Corps; he reported that the troops of this brigade, after commencing the advance, had come under a heavy artillery fire and had fled, abandoning in their flight not only their equipment, but even their rifles, and that this disorderly mob had invaded the L. of C. organisations of the XVth Corps, and were creating a panic amongst the transport. The Commander of the artillery group which had been with this brigade now arrived, and reported that he had lost his guns, as the infantry had abandoned them.

"General Samsonov despatched the available officers of his own staff to re-establish order in the brigade. In about two hours time these officers had succeeded in collecting approximately one battalion each from the 3rd Narvsky and 4th Koporsky Infantry Regiments, with some officers, and in bringing them up to the Army Commander in good order. General Samsonov addressed a speech to them, and then ordered them to be put in reserve behind my corps, and in front of the point occupied by us.

"Finally, Captain D., who had been sent by me to meet General Klyuev, arrived and reported that German patrols were moving about between our corps, and that he had got through with difficulty (he was on a German cavalry horse, as his horse had been killed in a skirmish). General Samsonov despatched orders to the XIIIth Corps to advance with energy."

"A short time later when dusk had already descended, Klyuev opened artillery fire, to which the Germans immediately replied from Westward of Hohenstein. Alongside the artillery positions, both German and Russian, fires started up, as always happens, and thereafter the XIIIth Corps advanced no farther.

"I turned to General Samsonov with the words: 'Now we must expect a catastrophe.' A deliberation began. General Postovsky was silent. I proposed a retirement on Khorjele. General Samsonov objected that this point had been occupied by the German troops pursuing the VIth Corps.¹ In his opinion the XVth and XIIIth Corps and the remnants of the 2nd Infantry Division should retreat on Neidenburg, which was being defended by the Guards' Regiment and by a brigade of the 6th Cavalry Division. I said no more, as it was necessary to settle on some plan. They began to write orders. Meanwhile General Samsonov called me aside and told me that after issuing instructions to my corps I was to follow with all speed to Neidenburg, to take measures for the determined defence of that town, sending there the first units to arrive, to assist the infantry and cavalry defending that town. There had hardly been time to hand me the Army Orders, and despatch them to Klyuev and Mingin,² when the Germans opened fire from the direction of Hohenstein on the rear of the XVth Corps positions, and upon the hill on which the staffs were. Panic immediately broke out in the Koporsky and Narvsky Regiments, and these

¹ Khorjele had not been occupied by the Germans. (Author's note).

² The Commander of the 2nd Infantry Division.

units took to flight. General Samsonov rode off with his staff, and I stayed to write orders for the corps. When the officers sent by me to the divisional commanders had returned with the acknowledgments for these orders, I and my staff, with an escort of one sotnia, moved off at a walking pace along the road to Neidenburg. The night was dark and warm. After about an hour we perceived the Staff of the Army resting around some buildings at the side of the road. I rode up to General Samsonov, who seemed to me to be calmer. He again spoke to me aside of the serious position we were in, and said that it was still possible to get out of it if we held Neidenburg."

But on the evening of the 28th Neidenburg was already in German occupation. The brigade of the 6th Cavalry Division had proved unable to execute the task demanded of it, which was quite beyond its strength, and the inconsiderable remnants of the 2nd Brigade of the 2nd Infantry Division, which had retreated on Neidenburg in complete disorder the day before, were of no fighting value on the 28th August.

As we know from the above quoted Second Army Orders for the 28th, the task set the XXIIIrd Corps was as follows :

"The XXIIIrd Corps and such units of the 3rd Guards' Division as have arrived must at all costs maintain their position on the front westward of the village of Frankenau. A brigade of the 6th Cavalry Division is being placed under the orders of the Commander of the XXIIIrd Corps."

These lines of the Army Orders cannot but fail to arouse the greatest astonishment on the part of the reader. Indeed, by no manner of means is it possible to understand words "position westward of the village of Frankenau" to include any reference to the defence of the approaches to Neidenburg running southward of Lake Kownatken. The position at Frankenau, which was to the north of Lake Kownatken, was right away from the roads leading from the Gilgenburg area to Neidenburg. General Kondratovich, the Commander of the XXIIIrd Corps, was in a difficult position owing to the fact that on the 29th there were in reality only three infantry regiments at his disposal (the 1st Brigade of the 2nd Infantry Division and the Kegsholmsky Guards' Regiment, with the 2nd Artillery Brigade, one battery of the 3rd Life Guards' Artillery Brigade and the 23rd Howitzer Group) and one cavalry brigade (of the 6th Division). The remnants of the 2nd Brigade of the 2nd Infantry Division did not represent a fighting force. Thus, all that General Kondratovich could do to amend the blunder of the Staff of the Second Army, in leaving Neidenburg completely open from the West, was to leave the brigade of the

6th Cavalry Division in the area to the south of Kownatken. But the task imposed by Army Orders—to hold on to their position to the west of Frankenau—was splendidly fulfilled by the three regiments of the XXIIIrd Corps. As soon as the Germans were ascertained to be advancing into the Waplitz area, the 1st Brigade of the 2nd Infantry Division undertook a counter-offensive against the Germans who were in contact with their left flank. More than a thousand prisoners and many guns and howitzers fell into the hands of our gallant infantry. But there was, of course, no question of any further development of this success. The 1st Brigade of the 2nd Infantry Division was at very low strength after the losses suffered in the fighting of the 26th August.

Shortly after noon it was ascertained that a German Infantry Division was attacking Rontzken. Numerous German guns were firing in support of this attack, which General Kondratovich could only oppose with the Kegsholm Life Guards' Regiment. The huge superiority in strength on the German side forced this regiment to retreat, but it disputed every yard, retiring in the general direction of Lahna. Neidenburg still remained unprotected. One can only be amazed at the way the Germans allowed themselves to be mystified up to 3 or 4 p.m., by General Baron Setempel's thin screen of cavalry.¹ Many of the L. of C. formations of the army still remained in Neidenburg.

These same Army Orders for the 28th August required the 1st Corps "at all costs to maintain its position in front of Soldau, in order to safeguard the left flank of the army." In the situation which had arisen, the essential point was not the safeguarding of the left flank of the Army, but the defence of the lines of communication of the centre corps, and this task, so vital at this moment, was not to be executed in the Soldau area, but, as we have seen, in the Neidenburg area.

But on the 28th August the divisions of the 1st Corps were suffering from the effects of the defeat inflicted upon them the day before, and their morale and powers of resistance were quite undermined. The leaders of the corps were in no better state. General Artamonov, removed on the 27th August from the command of the corps, had been replaced by General Dushkevich (the Commander of the 22nd Infantry Division). The state of morale existing in the 1st Corps not only

¹ One cannot help recalling the reproaches blatantly directed by the Germans against Rennenkampf's army, for allowing itself to be mystified on the day following the battle of Gumbinnen.

was unfavourable to the display of any initiative or activity, but even affected the further withdrawal of the troops of this corps to Mlava. As we know already, on the evening of the 27th only a rearguard (consisting of the three regiments of the 1st Rifle Brigade, one regiment of the 3rd Guards' Infantry Division and one regiment of the 22nd Infantry Division, with 5—6 batteries) had remained behind on the left bank of the River Neide. The remainder of the 1st Corps, disorganised by battle and retreat, had been assembled on the road from Soldau to Mlava. This was the state of affairs which coincided with the transfer of the command of the corps to General Dushkevich, on the dismissal of General Artamonov. In view of the disorganisation which existed in the staff work of the corps, this period of transition could not but have its effect on the further operations of the corps. The vacillation in the control of the corps was rendered worse by the circumstance that Army Orders for the 28th were not received by the Staff of the Corps during the 27th, and consequently the Staff prepared orders for the further retirement of the Corps to Mlava, with a rearguard at Mlava. The hour for the retirement was not named, but doubtless this decision on the part of the Corps Commander had its effect in weakening the determination of the rearguard left in front of Soldau. This rearguard, composed of units of three different divisions, possessed certain intrinsic elements of weakness. Nevertheless when an offensive by superior forces, supported by a numerous artillery, commenced from 5 a.m. against General Sirelius' rearguard, his units held out till 10 a.m. after which with both their flanks enveloped, and under a German artillery fire which completely dominated their own, the units of the Russian rearguard retreated behind the stream at Soldau having evacuated the town of Soldau itself at 11 a.m.

On the 28th August information reached the Staff of the 1st Corps to the effect that the Germans were advancing in an eastward direction on Neidenburg. However, in consequence of the disorganisation in the control of the corps, no action was taken by it.

We have stated above, that from the moment General Samsonov moved to Nadrau, the control of the Second Army for practical purposes ceased to exist. In the orders for the retreat, issued by General Samsonov on the evening of the 28th August (it has not been possible to determine the hour of issue), the army was ordered to retire to the front Ortelsburg—Mlava, while the 1st Corps was ordered to take the

offensive against Neidenburg. General Samsonov reported these instructions to General Jilinsky; this report was received by the Staff of the Army Group at 9-10 a.m. on the 29th August. Probably this was the time at which was despatched the telegram to which General Jilinsky refers in his report dated the 31st August 1914, No. 3052, wherein it was stated that upon the receipt, by the Staff of the North-Western Army Group, of the report regarding the retirement of the 1st and VIth Corps, General Oranovsky telegraphed to General Samsonov; "General Jilinsky orders the withdrawal of the Corps of the Second Army to the line Ortelsburg—Mlava, where the Second Army is to be reorganised. 2521." "But," adds General Jilinsky, "the telegraph, apparently, was not working."¹

This is the most complete picture that can be given of the battles of the 28th August, as they appeared from the Russian side.

Let us see whether the Germans found it easy to advance on this day, the 28th August. Even on the 27th complete encirclement had been rendered fully possible by the strategic situation created on the battlefield; both Neidenburg and Passenheim lay unprotected. It might well have seemed that the Russians would not even receive respite to the 28th August.

To commence with the German right flank. As early as 7-30 p.m. on the 27th General François, the Commander of the 1st German Army Corps, issued the following orders:—

"Under the direction of General Meves, the neutralisation of the Russian batteries at Soldau is to commence at dawn. The infantry of the divisions and of both Mühlmann's and Schmetau's detachments are to occupy jumping-off lines for the attack on Soldau. The time of commencement and order of the attack will be announced to-morrow at 6 a.m., on Hill 202, to the west of the Usdau main road. Send officers to receive the orders for the attack."

At 6 a.m. the field of battle was still covered with mist, but this soon after dissolved, and General Meves' artillery immediately commenced preparation upon the whole front.

At 6-40 a.m. General François issued orders for a general attack by the units of the corps in the fighting line.

"The 1st Infantry Division with Schmetau's detachment is to commence the attack on Soldau from the line Fylitz—Klenzkau—Schönwiese.

¹. "Brief strategic outline of the war of 1914—1918," Vol. I, p. 100, published by "Voennoe Delo," Moscow.

"The 2nd Infantry Division is to await my orders at Gross Tauersee.

"Mühlmann's detachment is to seize Pierlawken, and to get into touch there with the 1st Infantry Division."

At the same time the Commander of the 8th Uhlan Regiment (of the 1st Infantry Division) with one battery and a detachment of cyclists from the 43rd Infantry Regiment supporting them, was ordered to advance through Grosse Koslau on Neidenburg.

These instructions led to an engagement between the rearguard of the Russian 1st Army Corps, which consisted of 5 regiments and 5—6 field batteries, and two German Infantry divisions (the 1st, Schmetau's detachment and Mühlmann's brigade) with 16 field and 8 heavy batteries. Thus the Germans had a more than *quadruple* superiority in fire strength.

While this unequal battle was in progress, at 8 a.m., the Staff of the Army enquired of the Staff of the Corps concerning the state of affairs. The latter replied that the 1st Division had been despatched against the *weak* Russian force at Soldau, and that the 2nd would be sent to Neidenburg. Following on this came a telephone message from the Staff of the Army: "Orders to the 1st Corps. The Army Commander attaches special importance to the earliest possible occupation of Neidenburg by the 1st Corps, and of Willenberg by the cavalry."

After stubborn fighting Soldau was captured at 11 a.m.

"In view of the favourable course of the battle," writes General François in his memoirs,¹ "I detained General Schmetau's detachment on the outskirts of Klentzkau, and held the 2nd Infantry Division at Gross Tauersee in full readiness to march. I decided to move Schmetau's detachment and the 2nd Infantry Division on Neidenburg in order thereafter to occupy with detachments the 36-verst main road Neidenburg—Willenberg, in order to cut the line of retreat of the Army of the Narev. The 1st Infantry Division, immediately after the capture of Soldau was to go to Neidenburg and form my reserve there, but I left Mühlmann's detachment at Soldau, to keep the line of the River Neide in their hands."

"But it fell out otherwise. Major Massov arrived by car and brought the following orders from the Staff of the Army:—

Frogenau, 28/8 9-10 a.m.

The 41st Infantry Division has been thrown back on Wronowo by the enemy. The 1st Army Corps must immediately send the division assembled at Schönkau, to Rontzken, to avert by means of their advance a break through on the part of the enemy.

¹. "Marneschlacht und Tannenberg," pp. 216, 217.

The active units in Schmetau's detachment are to attack immediately in the same direction. The Army Commander insists on the instant execution of these orders. Haste is essential. Report when the division will march."

We can tell from these orders how gallantly the troops of the Russian XVth Corps and 2nd Infantry Division must have fought. Instead of continuing the manoeuvre against Neidenburg and the rear of Samsonov's army with the whole of their Ist Corps, the efforts of the Commander of the Eighth German Army were directed towards pushing General François' Corps up on the right flank of the XXth Corps. The gallantry and energy of the Russian troops again concealed from the eyes of the German Staff the disastrous nature of the strategic situation of the Russians. By deflecting the free division of the Ist Army Corps from the direct road on Neidenburg, Ludendorff postponed the occupation of this extremely important road junction, and consequently, removed the possibility of an early occupation of the main road Neidenburg—Willenberg by the leading units of the 1st German Corps.

At 1 p.m., General François received new orders from the Staff of the Eighth Army.

"28/8, 12-25 p.m.

"The Ist Army Corps is to assist the 41st Infantry Division, which is apparently retreating from Wronowo. The corps is also to continue the general pursuit in the direction of Lahna. The Ist Army Corps will render great service to the army by operating in accordance with these instructions."¹

General Ludendorff makes no reference in his memoirs to the two sets of orders written by him which have been quoted above; but he mentions the defeat of the 41st Infantry Division.²

"On the morning of the 28th we travelled to Frogenau, where we established ourselves in the open air at the exit to the village. General von Scholtz was in the vicinity. A poor telephone line served as communication with the 1st Army Corps. There was no possibility of establishing communication with the other corps.

"Our first impressions were in no wise favourable. Neidenburg had not yet been occupied. The 41st Infantry Division had been attacked at Waplitz and repulsed. It had suffered very severely, and was now to the west and extremely apprehensive of an enemy counter-attack. I sent an officer there by car. On his return he reported that the situation of the division was poor. On the Mühlen side the Landwehr had not pushed forward. The state of affairs on the right flank of the XXth Corps might become serious, should the enemy deliver a concentrated attack. At the least this would protract the battle."

¹. "Marneschlacht und Tannenberg," p. 218.

². Ludendorff, "Meine Kriegserinnerungen," pp. 41, 42, 43.

One thing certain is that, impressed by the fighting of the Russian XVth Corps and the units of the 2nd Infantry Division, the Staff of the Eighth Army had become nervous and was depicting the situation to itself in lurid colours. But General François realised clearly that, to encircle the central corps of Samsonov's army, the line of operations of the 1st Army Corps should be one, not on Lahna, but on Neidenburg. To Lahna he sent his 2nd Infantry Division, which became engaged with one Russian regiment (the Kegsholmsky Life Guards) in the Rontzken area, but he sent the 1st Division, which by now had become available at Soldau to Neidenburg, incorporating it in Schmettau's detachment. Thus it ensued that when the alarm in the Staff of the Eighth Army had passed, and when at 2-30 a. m. Captain von Waldow of the General Staff arrived thence with General Hindenburg's orders for an energetic pursuit in the direction of Neidenburg—Muschaken—Willenberg, the German 2nd Infantry Division and Schmettau's detachment had already marched in this direction, and thus the agitation in the Staff of the Army had had no effect upon the operations of François' Corps. Immediately after the occupation of Neidenburg (at about 4 p.m.) General François pushed his 1st Infantry Division on to Muschaken and Schmettau's detachment on to Willenberg, but diverted the 2nd Division to Grünflies.

On the 28th August the following German forces were assembled in the area northward of Lake Mühlen:

- (a) Unger's Division, which had been deployed in a position between Mühlen and Nieder-Wolla, on the River Drewenz.
- (b) The 3rd Reserve Division, which had one brigade deployed between Nieder-Wolla and Kirsteinsdorf, and the other echeloned in rear as the Divisional Commander's reserve. The control of both divisions (Unger's and the 3rd Reserve) on the 28th August was united in the hands of General Kurt von Morgan, the Commander of the 3rd Reserve Division.
- (c) The 37th Infantry Division had reached the Reichenau area at 6 a.m. on the 28th; the German Command though now aware that General Unger's units were holding their ground, had not sent this division back to its former line, but had moved it further towards the inner flank of the 3rd Reserve Division. The motives governing such a decision were apparently: (1) fear of the possible appearance of the Russian XIIIth Army Corps from the direction of Allenstein; (2) the desire to give backbone to the 1st Landwehr Division, which was arriving on the battle field from Osterode.
- (d) Von der Goltz' 1st Landwehr Division had commenced detraining at Biessellen.

On the 28th August all these forces were ordered to assume the offensive against the Russians in the Hohenstein area. Unger's Division, the 3rd Reserve and the 37th Infantry Divisions were directed against the front Paulsgut—Hohenstein, and General von der Goltz' Division was to execute an advance, with the main road from Hohenstein through Manchengut, leading to the main road between Grieslienen and Hohenstein, as its axis. The 1st Landwehr Division was thus to turn the position of the Russians in the Hohenstein area from the north, cutting them off from assistance from the direction of Allenstein. The turning of the Russian position in the Hohenstein area from the south was to be accomplished by the 41st Infantry Division, whose orders were to advance in the direction of Waplitz. We already know of the complete defeat inflicted on this division. The German Command must have regretted exceedingly its unnecessary nervousness on the 27th, the result of which was that the line of retreat of the XVth Corps still remained open.

At 7 a.m. on the 28th, the German artillery commenced the battle in the area northward of Lake Mhlen. The Russian XVth Corps held out stoutly in the sector along the River Drewenz between Mhlen and Dröbnitz. This fact stands forward, if only by the extract quoted above from Ludendorff's memoirs ".....our first impressions were in no wise favourable.... The Landwehr at Mühlen had not pushed forward.....".¹ About 9 a.m. debouching from

¹ The type for this book had already been set up, when the author received a new document relating to the military operations of the XVth Corps. This document was the diary of Colonel Jelondovsky, who was with the 6th Artillery Brigade. This is the Colonel's description of an episode in the fighting before Mühlen on the 28th August. "About 8 o'clock, out of the strip of forest before the front of the central group of our batteries, and to the North, lines of men suddenly appeared: they were undoubtedly Germans. The batteries opened fire. The German infantry continually advanced towards us. Here and there between the puffs of the shrapnel bursts, groups of riflemen could be seen getting up and running swiftly forward. The target decreased. Nothing could be seen from the battery, but everyone realised that the enemy was approaching. The fire of our batteries on our right was masked by the sixth battery. To fire over it at short range was dangerous. Soon we had to switch the fire of the right flank of our section to the left, lest we should hit our own men with flying bullets in case of premature bursts. Already our sights were set at 12. We should soon have had to change to ease. But suddenly the ranges began to increase, considerably faster than they had decreased. The attack had been repulsed. The 6th Battery fired a few more rounds and silence descended. The battery commander informed us by telephone that the remnants of the German Infantry were fleeing into the forest. But then again came orders, again rapid fire, again the range diminished not however reaching the previous minimum. The Germans were beaten off for the time, and so the conviction grew that they would not attack us again. Even the Battery Commander from behind the observation point took a few paces towards the battery and shouted: "Thanks for your splendid work. The attack has been repulsed." The gunners gave a loud cheer in reply, and their caps flew in the air. I asked the Battery Commander's permission to ascend to the observation point and observe the result of our work, and having received it, in a few minutes I was observing through Zeiss glasses. The clouds of smoke from the shellbursts were still slowly dissolving, gradually revealing the passage between the bushes, and there lay the bodies of the killed, and the wounded crawling like worms. Many could be seen between the bushes...."

the forest to the north of Hohenstein, the units of Von der Goltz' Division commenced an attack on the heights lying to the north of Hohenstein.¹ Simultaneously the 6th Reserve Brigade (the 3rd Reserve Division) advanced from the South-West, from Kirsteinsdorf, on Hohenstein, and the 3rd German Infantry Division followed close behind it along the main road Reichenau—Hohenstein. We can thus determine with certainty the fact that the 2nd Brigade of the Russian 1st Infantry Division (the XIIIth Corps), which had been ordered by General Martos to turn the left flank of the German position on the River Drewenz, found itself in its turn suddenly caught between the pincers of the 1st German Landwehr Division (on the North-East) and the 6th Reserve Brigade of the 3rd Reserve Division (on the South-West). As will be recalled, General Martos asserts that the Staff of the XVth Corps only learnt of the retirement of the 2nd Brigade of the 1st Infantry Division at 3 p.m. Consequently this Brigade held out for several hours to the West of Hohenstein, with the enemy outflanking it on its right flank to a great depth, and its "flight" only took place after an obstinate struggle with an enemy many times its superior in strength, and under extraordinarily difficult tactical conditions. Indeed, it could not have been otherwise, for only thus could it have been possible for the right flank of the XVth Corps to remain till 2—3 p.m. on the River Drewenz. This in no wise detracts from the gallantry and determination of the units of the XVth Corps on the 28th August, to which all the German authorities testify, without exception. But the circumstance that the German 37th Infantry Division and 1st Landwehr Division did not develop their outflanking movement, and did not cut off the units of the XVth Corps, can only have been the result of their encountering *en-route* the resistance of the Narvsky and Koporsky Infantry Regiment, possibly badly organised, but in any case a gallant resistance.

Judging from German authorities, the 5th Reserve Brigade of the 3rd German Division only succeeded in obtaining possession of Dröbnitz and the adjacent heights "in the first hours of the afternoon" and "after a desperate struggle with an enemy who clung fast to his ground."² Also General Unger's attacks in the Mühlen area were at first vain. After the capture of Dröbnitz the 5th Brigade of the 3rd

¹ Schwarte, p. 305.

² "Bei der um Hohenstein fechtenden deutschen Kampfgruppe hatte in der ersten Nachmittagstunde die 3 reserve-division nach hartem Ringen mit dem sich zähe zur wehr setzenden Gegner Drubnitz und die Hohen beiderseits des Dorfes genormen." Der Grosse Krieg, 1914-1918," Schwarte, p. 307.

German Infantry Division was sent to the front Lichteinen—Königsgut, in order to outflank the centre of the Russian XVth Corps from the north; the other brigade (the 6th), as we have already stated, was sent towards Hohenstein, to be exact, to the front Königsgut—Sauden, and General Unger was ordered to renew the attack in the Mühlen area.

Hohenstein was occupied about 12 noon by units of the 75th Landwehr Regiment of the 1st Landwehr Division,

The determined resistance offered by the retreating troops of the XVth Corps had its effect; during the night and the whole of the day following no attempts at active operations on the part of the Germans were remarked, and General Martos' troops disengaged themselves entirely from the troops of General von Morgen.¹

Von der Goltz' Division got into a very critical situation after engaging in action with the Russian XIIIth Corps.² The Germans explain this as having been due to the paucity in artillery of the 1st Landwehr Division (which had 2 field and 2 heavy batteries).

The encirclement of the Russians in the Hohenstein area, as conceived by the Staff of the Eighth Army, had thus completely failed. After shiftings and undulations of the German and Russian fighting lines, the fronts of the opposing sides now extended parallel to one another: the German, between Compitten and Thureau, the Russian, between Grieslienen and Frankenau. The exploits of the Russian troops and the skill of their commanders in the line, and especially of General Martos, had again done all that was possible to defer the catastrophe brought about by mistaken strategy, forcing the Germans to close their fighting line in towards the centre and to withdraw the nearest units on the encircling flanks.

But on the 28th August new and important German forces were approaching the Hohenstein battlefield from the east.

As already stated, on the evening of the 27th August the Germans had withdrawn one of their left flank corps (the 1st Reserve) to the area Patricksen—Gross Purden. Impressed by the energetic operations of our XVth Corps, and by the occupation of Allenstein by our XIIIth Corps, the Staff of the Eighth Army decided on closing in towards the centre their XVIIth Corps also, and on issuing orders

¹ From the recollections of an officer of the General Staff of the 8th Infantry Division. (Manuscript in the possession of the author).

² Schwarte, p. 307.

to the 1st Reserve and XVIIIth Corps for a combined attack on the 28th August against the Russians at Allenstein. It was stated in these orders that, should the enemy wheel southward, the right flank of the corps was to be advanced on Stabigotten, and, in addition the XVIIth Corps was ordered "to continue the pursuit on Willenberg."

It is quite logical to suppose that the pressure experienced by the Germans owing to the energetic operations of the Russian XVth Corps, together with the unnecessary nervousness displayed by the Staff of the Eighth Army, apparently emanating from Ludendorff himself, caused the closing in on the centre of the whole of the left flank of the army, the line of retreat south-eastward of the central corps of Samsonov's army being thus un-covered.

In fulfilment of the abovementioned orders from the Staff of the Eighth Army, the 1st Reserve Corps was directed against the Russian XIIIth Corps, which on the 27th August was at Allenstein. However, the Commander of the XVIIth German Corps decided to move on Wartenburg, in order to deploy northward of the 1st Reserve Corps, and the pursuit of the Russian VIth Corps retreating southward was entrusted to General Hanna's Detachment (consisting of 3 battalions, ¹ 3 batteries and 2 squadrons), which was marched on Ortelsburg. We thus see that on the 28th August the Russian VIth Corps was retreating not from real enemies but from imaginary ones. Another feature is also noteworthy in this connection—the large margin of safety employed by the German Higher Staffs in all calculations relative to operations. Until the final defeat of the enemy every effort was directed towards the concentration of further masses of troops on every battle field upon which the issue lay undecided.

Taking into consideration the fact that the XVIIth German Army Corps could not arrive before noon, General Belov, the Commander of the 1st Reserve Corps, decided to commence the offensive on Allenstein only at 10 a.m.²

However, at the very commencement of the movement, an aeroplane dropped new orders from the Staff of the Eighth Army, timed 9-45 a.m., instructing the 1st Reserve Corps to proceed by the most direct route and attack without delay on the front Stabigotten—

¹ The 176th Regiment, which had suffered heavily at the battle of Gumbinnen and was not yet up to strength.

² Schwarte, p. 306.

Grieslienen. The order was concluded by the words "For urgent execution." General Belov then wheeled the corps sharply south-westward: the 36th Reserve Division through Gross Bertung on Darethen, the 1st Reserve Division through Zasdro on Stabigotten. No mention was made of the XVIIth Corps in these orders. General Belov suggested to the Commander of the XVIIth Corps, General Mackensen, that he also should march south-westward on Jedwabno, *i.e.*, on the left of the 1st Reserve Corps, but General Mackensen did not agree to this and held to his former decision—to march on the right of the 1st Reserve Corps. He sent Captain Wartenswerfer by aeroplane to report to the Staff of the Army, and kept his corps halted at Wartenburg.

The 1st Reserve Corps, marching in the direction ordered, cut the lines of communication of the Russian XIIIth Corps. The 36th Reserve Division sent a detachment to occupy Allenstein, where a part of the transport and a battalion of Russian Infantry were captured.

In the Darethen area the 1st Reserve Corps encountered the resistance of the rearguard of the XIIIth Army Corps.¹ Despite the colossal disproportion in strength, this rearguard succeeded in delaying the further advance of the Germans across the lines of communication of General Klyuev's troops, but only at the price of its own sacrifice. Operating against the Dorogobujsky Regiment were the advance guards of the 36th and 1st Reserve Divisions, reinforced by the 21st Reserve Regiment—a total of 10 battalions with 6 batteries.

At 2-35 p.m. Colonel Forman (of the Staff of the Army) handed the following orders to the Staff of the XVIIth Corps: "The main body of the XVIIth Corps is to pursue towards Ortelsburg. A detachment of the maximum possible strength to move on Jedwabno. The cavalry to move on Johannisburg—Rudschanny. Pursue to the last gasp (*bis zum letzten Atemzuge*). Forward." General Mackensen then wheeled southward from Wartenburg. By evening his division had reached the line Gross Purden—Klein Rauschken.

In addition to the detachment sent earlier to Ortelsburg, General Hanna despatched:—

To Grammen—Colonel Steikeller's Detachment to Passenheim and Narathen—the 5th Hussar Regiment (the cavalry of the 36th German Infantry Division).

¹ The three battalions of the 143rd Dorogobujsky Infantry Regiment.

At 5-30 p.m. on the 28th August the following orders for the Eighth German Army were issued from Tannenberg :

"As far as can be ascertained from the reports received up to now, the 1st Russian Army Corps is in full flight through Mlava towards Warsaw; the XXIIIrd, XVth and XIIIth Army Corps are scattered through the forests to the south-east of Hohenstein and Allenstein; the VIth Russian Army Corps, one division of which has been annihilated entire, is in full flight through Ortelsburg.

"The 1st Army Corps is pursuing through Muschaken—Kaltenborn in the direction of Willenburg and Myshinets. The transport and parks are echeloned along the road Neumark—Usdau.

"The XXth Army Corps with the 3rd Reserve Division is pursuing through Jedwabno towards Ortelsburg.

"The Landwehr battalions of Von der Goltz's Division belonging to the XXth Corps are to be assembled at Hohenstein, where this division will be quartered; the supply of rations and ammunition to this division will be carried out by the XXth Corps.

"The units from fortress garrisons and the units of the 70th Landwehr Brigade which are with the XXth Corps are being assembled in the Waplitz—Hohenstein area.

"The units and parks of the XXth Army Corps are forming echelons along the road Lobau—Gilgenburg—Gross Gardienen, and those of the 3rd Reserve Division along the road Osterode—Hohenstein.

"The 1st Reserve Corps will remain for to-day where it now is, but to-morrow morning it is to march by the road Dietrichswalde—Alenstein. Transport and parks in the Dietrichswalde—Alt-Jablonken—Locken area, with echelons to Monrunen. The 1st Reserve Corps must put out outposts on the Wartenburg flank.

"The XVIIth Army Corps is to be concentrated on the western bank of the River Alle between Jonkendorf and Guttshadt, Outpost line on the Seeburg flank. Transport and parks at Bruckdorf and Liebstadt, with echelons to Preussisch Holland.

"The 1st Cavalry Division is to remain in the Bischofsburg—Seeburg area, and is to advance one brigade through Lützen to reconnoitre the area to the east of the Lakes and determine the whereabouts of the Russian IInd Corps, which must be retreating on Grajevo.

"The Staff of the Army will remain at Osterode."

Although these orders are of the greatest interest in studying the methods by which the Germans conducted the operations against Samsonov's army, in his memoirs Ludendorff does not let slip so much as one word concerning them. Describing the course of events with the Staff of the Army during the second half of the 2nd, he writes: "In the afternoon the situation changed to our advantage. To the west of Hohenstein the 3rd Reserve Division, and afterwards the 37th Infantry Division, pushed forward. Von der Goltz' Landwehr

Division occupied Hohenstein, and it seemed as if the enemy front had given way. General Hindenburg and I had intended to go to Mühlen by car, but we immediately became implicated in a brief panic, caused by the Russian prisoners, who were being brought in in large numbers. This panic produced a bad impression and spread far to the rear.¹

"We did not know the exact situation in the various corps, but there could be no doubt that the battle had been won. It was as yet impossible to say whether this victory was another Cannæ. The 1st Army Corps was ordered to send part of its forces to Willenberg, and the XVIIth Army Corps was to be wheeled in the same direction. It was essential to cut the Russian line of retreat. During the night new reports came in. It appeared that the Russian XIIIth Army Corps had been moved from Allenstein to Hohenstein, where the Landwehr was exerting strong pressure. The 1st Reserve Corps had reached the area to the south-west of Allenstein; this manoeuvre was to close the ring around the Russian XIIIth Corps, thus putting an end to the battle here, while the 1st and XVIIth Corps were to cut off the retreat of the other Russian units."²

We can tell from these lines that when the above-quoted orders were composed and issued, the Staff of the Eighth Army based its appreciation of the situation on information only approximately correct, for which reason the "information relating to the enemy" in the orders is prefixed by the words: "As far as can be ascertained from the reports received up to now.....".

The interpretation of these data errs greatly in the direction of exaggeration, as the Russian 1st Army Corps was not "fleeing to Warsaw," and within the next few days, by seizing Neidenburg, gave the German Command cause to remember it; still further from the truth was the information relating to the XIIIth and XVth Corps; these latter as yet were far from being "scattered through the forests."

By reading the orders for the Eighth Army, and then examining the tasks allotted to corps, a little consideration will show the reader that there could be no question of any encirclement of the Russian troops "scattered through the forests." The Eighth Army Orders, timed 5 p. m. on the 28th August caused the Army front to be wheeled through 90 degrees. This wheel was carried out with Hohenstein as its axis, and the 1st Reserve and XVIIth Army Corps, the two left flank corps, were marched rearward, the latter to Guttstadt, *i.e.*, 30-

¹ This panic serves as an excellent proof of the degree of strain undergone by the German troops in the fighting at Mühlen. (Author's note).

² Ludendorff, "*Meine Kriegserinnerungen*," p. 43.

versts to the north-west of Wartenburg. The two right flank corps were made responsible for the pursuit of General Samsonov's Army; the XXth being ordered to pursue in the direction Jedwabno—Ortelsburg, the 1st in the direction Willenberg—Myshinets.

Hence it appears that the sentence in the above-quoted extract from Ludendorff's memoirs—"..... It was as yet impossible to say whether this victory was another Cannæ" cautiously framed though it be, shows him to be no stickler for terminological exactitude. Of course there could be no question of the Command of the Eighth German Army having achieved another Cannæ, as this Command had itself withdrawn its left flank ten versts to the rear. What then is the explanation of the orders we are studying, and what object did they seek to attain?

Ludendorff is silent. So also is Hindenburg, who treats the fighting of the 28th in an extremely laconic manner in his memoirs; he devotes but one line to the fierce fighting of this day: "On the 28th August the sanguinary struggle continued."¹ But internal evidence in the orders provides the key to their meaning, contained in the instructions regarding the outpost defences of the 1st Reserve and XVIIth Army Corps: the former is to "put out outposts on the Wartenburg flank;" for the latter "outposts on the Seeburg flank" are ordered. Consequently the Eighth German Army changed front in expectation of the approach of General Rennenkampf's Army.

We know that the Staff of the Eighth German Army from a *directive* found on the body of an officer, was aware of the original basic idea of operations on the Russian North-Western Front, consisting of the combined operations of both armies around the Masurian Lakes. But, as already stated, the Commander-in-Chief of the North-Western Front, in his telegram No. 2761 of the 13th/26th August, had ordered Rennenkampf to invest Königsberg with two corps, and to pursue the Germans retreating towards the Vistula with his remaining forces (*i.e.*, 2 corps). These instructions had diverted General Rennenkampf's army from the direct roads which they should have followed, to be in a position to afford assistance to General Samsonov. But this of course could not have been known to the Staff of the Eighth German Army. They could only have known that General Rennenkampf's left flank had reached the Korschen area on the 27th. This was General Gurko's 1st Cavalry Division, which on this date was fighting

¹ "Aus meinem Leben," p. 88 (in the French translation).

a German detachment of all arms at Glaubitten and Padlechen (near Korschen station). It was a difficult matter to determine definitely whether the Russian Infantry Divisions were following closely behind their cavalry. General Gurko's energetic operations could only add force to these doubts. Consequently there were grounds for the General Staff of the Eighth Army to suppose that General Rennenkampf's left flank divisions might be on the heights of Seeburg by the evening of the 29th.

Recalling his feelings at the time when victory over Samsonov became an accomplished fact, General Ludendorff writes:—

"I could not rejoice to the full at this great victory; the anxiety caused me by General Rennenkampf's Army was so heavy a strain on my nerves" ("die Nervenbelastung durch Rennenkampf's Armee war zu schwer gewesen").¹ In his memoirs General Ludendorff on several occasions describes the alarm with which he looked northward, towards Rennenkampf's Army—"It had only to approach, and we should have been defeated." Even if exploited by the writer of these memoirs as a means of magnifying his services, this question is nevertheless of vital interest, and the military historian is obliged to take it into consideration. Of course, the question has nothing to do with those "24 very strong infantry divisions"² created by the imagination of Ludendorff. As we know, there were at this time in General Rennenkampf's Army; the 6½ infantry divisions with which he had fought at Gumbinnen, a second line infantry division (the 56th), and the 1½ infantry divisions of the IInd Army Corps which had come up on the left flank.³ It is of course understood, that, had he wheeled south-west, Rennenkampf would have had to secure the position by leaving screening forces facing Königsberg and on the River Alle.

To the east of Königsberg on the heights of the River Deime were two German Infantry Divisions (General Brodrück's Division, the 2nd Landwehr Brigade and a new Ersatz Brigade which had arrived from Königsberg). But it was not these troops which constituted the main threat to General Rennenkampf's Army while marching in the direction of Allenstein, but the railway lines which ran to the River

¹ Ludendorff, "Meine Kriegserinnerungen," p. 45.

² "Von 27 August abstanden dennoch nur zwei Kavallerie Brigaden zwischen Mauer See und Pregal gegen 24 sehr starke Infanterie Divisionen und mehrere Kavallerie Divisionen Rennenkampfs." Ludendorff, "Meine Kriegserinnerungen," p. 37.

³ The 1st Brigade of the 43rd Infantry Division had been left opposite Letzen pending the arrival of a second-line infantry division at Lyk.

Alle from the west : (1) the double-line to Wehlau, (2) the single-line to Friedland, (3) the single-line to Bartenstein, (4) the two single-line to Heilsberg, (5) the single-line to Guttstadt. In the course of a few days several divisions, withdrawn from France, could have detrained from these railways. Under such conditions cavalry alone, thrown out westward of the Alle to the Passargi could not have protected the western flank of the First Russian Army on its march to Allenstein. At least two to three infantry divisions would also have had to remain at the crossings of the River Alle, and further, to cover the operation from the activities of the German troops assembled in the Königsberg area, another two-division corps would necessarily have been employed. If the First Russian Army had really consisted of "24 very strong infantry divisions," Rennenkampf would still have had 19 infantry divisions left for the Allenstein operation, and in this case General Ludendorff's disturbed state of nerves would become intelligible. With such forces available the Russian victory at Gumbinnen would not have been dependent upon the turn of a hair and easily convertible to defeat, but on the 21st August fresh infantry divisions, which had taken no part in the fighting (and which, let us add once more, only existed in the imagination of Prittwitz and Ludendorff), would have continued the advance with energy, and thus there would have been no pause in the offensive of Rennenkampf's Army. This also explains the astonishment, expressed on several occasions in Ludendorff's and Hindenburg's memoirs, at Rennenkampf's failure to advance. As we know he commenced his further advance only on 22nd August during the second half of the day. We will not repeat here the reasons which necessitated this delay, but they could not have been understood by the Staff of the Eighth German Army, which overestimated by 200—300 per cent. the strength of the victorious enemy. At 9 p.m. on the 26th August the Staff of the Eighth Army believed that General Rennenkampf's Army had reached the front Wehlau—Gerdauen—Angerburg on this day.

On the evening of the 27th August the left flank of the Russian Army of the Nyeman was supposed to be on the line Rastenburg—Korschen—Bartenstein. The energetic operations of the Russian 1st Cavalry Division, which on this day had been fighting to the south of Korschen, seemed to confirm this supposition.

Having received no reports on the 28th as to whether the Russians had advanced, the Staff of the Eighth Army drew up the above-quoted

orders, which turned the XVIIth and 1st Reserve Corps back to the River Alle.

If one assumes the point of view of Ludendorff and his staff, with their erroneous estimate of Rennenkampf's strength, one must acknowledge that these orders represent a model strategical technique. Indeed, a new front-line sector, occupied by two corps, was formed on the line Guttstadt—Jonkendorf—Dietrichswalde, *i.e.*, between the Rivers Alle and Passargi, while the two reinforced Corps (the 1st and XXth) continued the pursuit of the defeated Army of the Narev, cutting off their southward line of retreat and driving them to the north. These corps were marching in echelon from the right, starting from the line Willenberg—Jedwabno. The operation was protected from attack from the south by General Mühlmann's ¹ Brigade at Soldau, and in addition two Landwehr Brigades had been assembled in the centre, in the Hohenstein—Waplitz area. Thus the general trace of the new front was that of a semi-circle described around Allenstein and Passenheim, against which General Rennenkampf must strike if he came to the assistance of General Samsonov, and thus these divisions would literally march into a *sac*. Even supposing that Russian activities in the south demanded the employment of the whole of the 1st Army Corps and Mühlmann's Landwehr to protect the German operation, the Germans could still have put 9 infantry divisions into the field against General Rennenkampf's divisions, *i.e.*, a force equal in fire strength to 13 or 14 Russian divisions. Nor was this all, for by the 3rd September—4th September another 4 German active divisions, arriving from the French front, would have come up on the left flank of the XVIIth Corps. It may be stated with conviction that the "Cannæ" which General Ludendorff was staging for the left flank of the Army of the Nyeman, would inevitably have become an accomplished fact. But, as we know, all these strategical calculations, brilliant from the technical point of view, were based on wrong premises. General Rennenkampf was actually three or four times weaker than Ludendorff pictured him, and did not fall into the trap laid by the latter. It is only given to soldiers of genius to "sense" the situation accurately and this ability is a product of "intuition." This was what Napoleon meant by saying that a general who pictures affairs to himself cannot be a great leader. The mistake which Ludendorff made, and in which he persisted even after the war, shows that

¹ Consisting of the 5th and 20th Landwehr Brigades, which were reorganised in the next few days to form the 35th Reserve Division.

he cannot be counted among the soldiers of genius. The persistence with which he upholds the legend of the strength of Rennenkampf's Army is due to a psychological characteristic of small minds: unwillingness to acknowledge oneself in error.


On the other hand it must be acknowledged that that part of strategical work which is based upon peace-time studies was executed to perfection by Ludendorff and his staff. Here one perforce is reminded of Field Marshal von Moltke's ruling idea in creating the German General Staff—that a leader of genius is an accident: the fate of a nation cannot be allowed to depend on an accident; therefore a cadre must be created, whose military skill, in case of the absence of genius, would serve as a substitute for it.

It is this calculating with "average persons" and "average conditions" which is the most characteristic feature of German strategy.

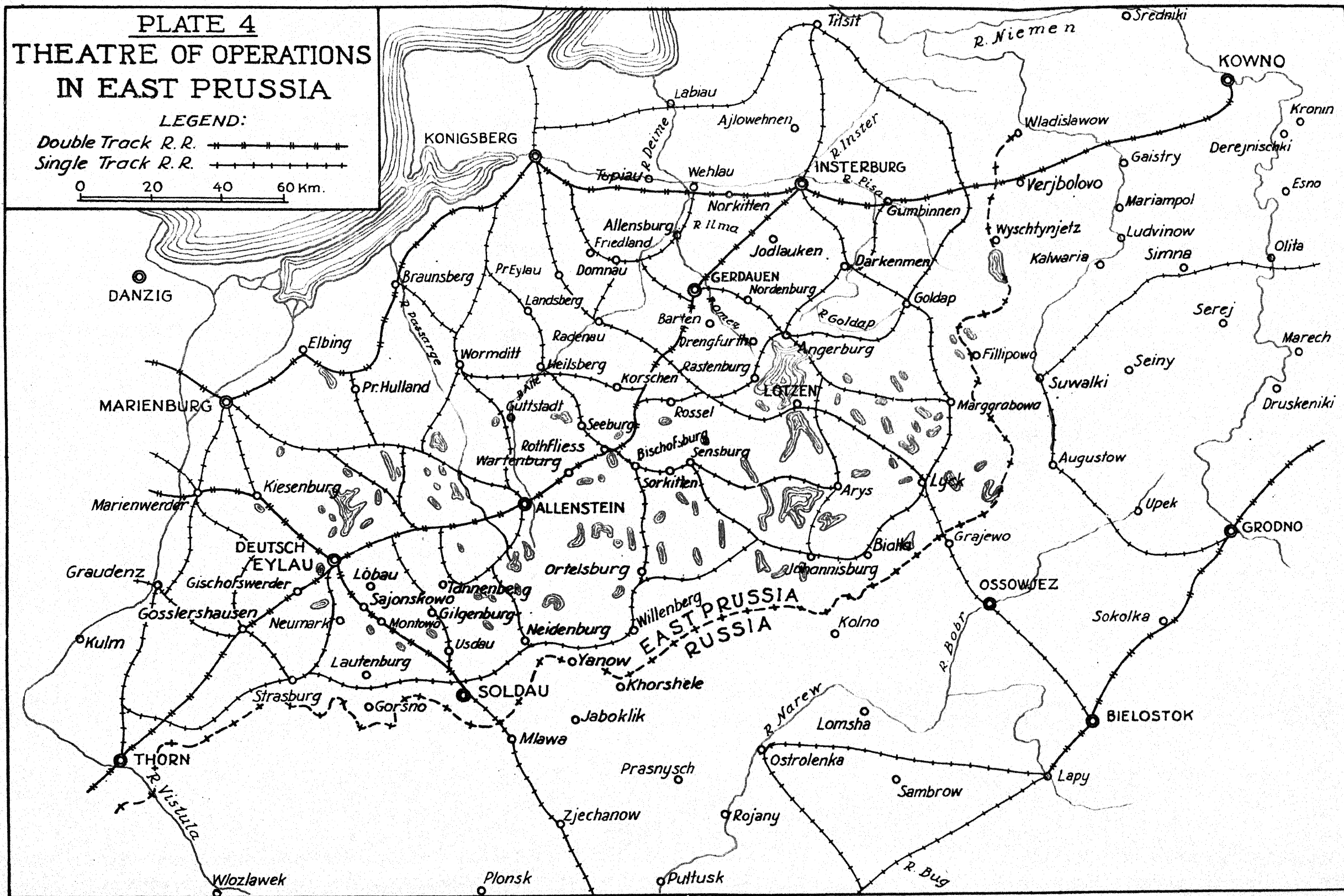
PLATE 4
THEATRE OF OPERATIONS
IN EAST PRUSSIA

LEGEND:

Double Track R.R. 

Single Track R.R. 

0 20 40 60 Km.



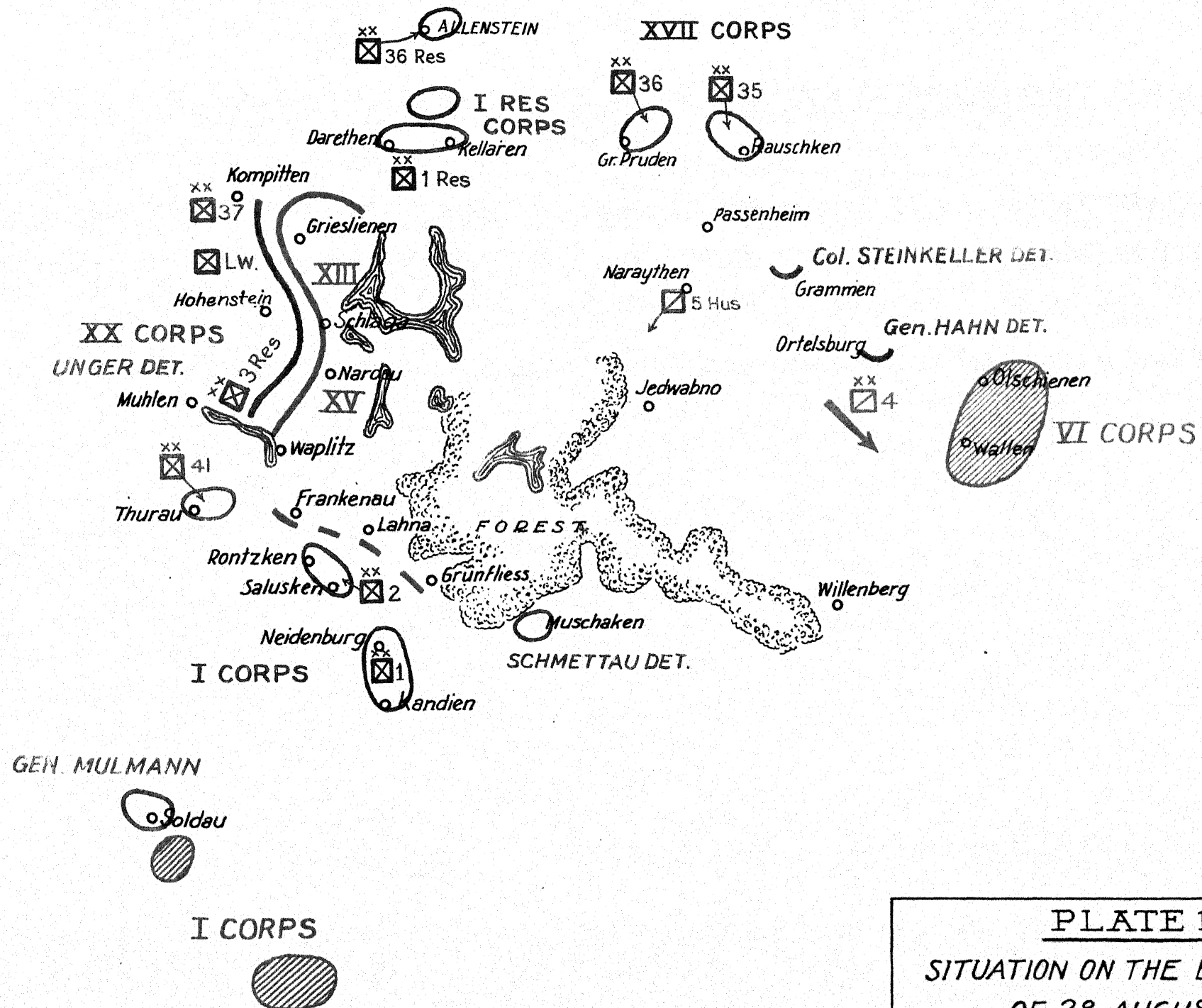


PLATE 14
SITUATION ON THE EVENING
OF 28 AUGUST

0 10 20 Km.

LETTERS TO THE EDITOR.

TANK VULNERABILITY.

SIR,

In the Editorial on page 150 of the April 1934 issue of the Journal occurs the following passage :—

“It is understood that an armour-piercing machine gun bullet has been invented which may paralyse tank movement as effectively as infantry are paralysed to-day. Already there is the new double-pointed foreign A. P. bullet which, with the anti-tank guns in a battalion, will—in war against first class Powers—give the tank only slightly greater advantages than his forbear, the knight in shining armour, achieved against gunpowder.”

This statement by itself is liable to cause disappointment to the infantryman who will deduce that the Tank which he had expected to silence machine guns for his benefit will be as vulnerable to these weapons as he is himself.

It is hoped that a few facts will help to allay these fears.

It must be remembered that improvements to bullets such as shape and hardness are of minor importance. They only ensure that the full theoretical weight is actually present when the bullet strikes and strives to penetrate. There are only two things which can defeat armour; weight and velocity. This is one of the first principles of mechanics, which cannot be disproved. Energy (and therefore penetration) is equal to the square of the remaining velocity multiplied by the weight of the A. P. shell or bullet. An increase of muzzle velocity necessitates strengthening the chamber and barrel in order to resist the additional shock of discharge. This modification besides being expensive also involves increased weight for the rifleman or machine gunner to carry. His powers in this respect are limited; and the main difficulty which designers have to face, and have not yet solved, is the production of a machine gun or rifle with sufficient muzzle velocity to ensure penetration of tank armour, whilst at the same time being portable by man or horse. An increase in the weight of the bullet will mean increasing the calibre if accuracy is to be maintained. Hence improvements in this direction will also increase the weight of the machine gun or rifle.

This question of portability was the main reason for the defeat of the knight in shining armour in his race against improvements in armaments. The weight carrying capacity of the horse has a definite limit, just as has that of a man. So much was this the case that it is believed that only cart horses were of any use to the mediæval knights in armour.

With the tank things are different. Improvements in the weight of fuel required per ton mile and in the weight and size of engine necessary to propel a certain weight at a certain speed are being made daily. There is much more scope here for ingenuity than there is with either A/T weapons or armour plate. Such improvements will certainly help the Tank more than its adversary. Machinery controlled by man will always win against the man alone. This is the first law of progress which cannot be disproved. The second is that every increase in the use of machinery will result in loss of simplicity. Simplicity is more essential to the man on the ground than to the man in a machine.

Whilst designers and manufacturers are endeavouring to solve the problems of the production of a super high velocity weapon which is within the carrying capacity of the infantry soldier, there is an almost greater prospect of improvements being effected in armour.

In the meantime, the tank is definitely leading in the race between armour and those A./T. weapons which are portable, and therefore, liable to be encountered in large numbers.

Against a limited number of A./T. guns of moderate mobility, the tank will always have a sporting chance by reason of its power of manœuvre.

Yours faithfully,
W. M. SUTTON.

THE PERIMETER WALL.

Sir,

May I make a few remarks on "SHIGGADAR'S" letter on the subject of the "Perimeter wall" as far as it concerns the Sapper.

Concertina wire has been tried out exhaustively during the war and subsequently, it has been "discovered" many times; it has always been abandoned owing to its inefficiency. The decision of the pattern is not a sapper decision. The infantry are the people who decide, as they are most interested in its efficiency. The sappers merely try to provide what is asked for; if the Infantry want concertina wire instead of the ordinary pattern, no one will be more pleased than the sapper as he will have less weight to handle. But a word of warning—when the time comes for it to be used, do not damn the sapper for providing an inefficient pattern and do not expect to be provided with an unlimited amount of an efficient pattern at a moment's notice.

2. *Portable Searchlights.*

As Shiggadar recognizes, this is largely a question of money. Many patterns exist of varying degrees of efficiency. Acetylene lights are, generally speaking, of low efficiency and comparatively cheap; electric lights are effective but expensive and heavy.

The saving of transport effected by the use of concertina wire would be swallowed up many times over by the transport required for a sufficient number of searchlights to be effective.

3. *Entrenching Tools.*

Many patterns of light entrenching tools have been tried out. Some of us have vivid recollections of trials conducted at Chatham with patterns which seemed to cover all the possible requirements of a dentist but very few of a "digger."

Can Shiggadar suggest a suitable pattern? We will arrange for it to be made and tried.

Yours truly,

"SAPPER."

MOBILITY.

SIR,

The article "The Perimeter Wall," as also "The Legend of Baridzai," published in your January 1934 number, affords very welcome existence of the growing and already widespread desire for "mobility," which can now scarcely fail to permeate the whole army and to become an instinct.

The wish to abolish or modify the "Perimeter Wall" is also a very welcome sign of a further peg in the coffin of trench warfare, from whose influence the army, still does not seem able to get away in mountain as in all other kinds of warfare—massive 5·9 proof camp walls, traverses, and parados, and masses of wire to be carried about, so subversive to all mobility, and so unnecessary.

But if I might venture to criticise the article referred to, I would suggest that in mountain warfare it is not the time required for the construction of the Perimeter Wall which makes marches short, and renders the early arrival of a large column in camp advisable. It is agreed that as a means of defence, perimeter walls are unnecessary; in fact they are seldom actually built when a column is on the move—anything for troops to form up on and to demarcate the boundaries of a camp will suffice—modern armament should stop any possible attack. But the infantry must camp somewhere, and they may just as well be placed round the perimeter where they are handy.

All ranks, too, must dig down or build up because sniping is probable and to omit digging or building is likely to be wasteful of life. The Mohmand expedition of 1933 showed that the tribesmen still snipe. So some kind of perimeter defence, though not necessarily a wall, will usually be formed and is desirable. It may not be very regular in shape and will be held by posts at intervals, but to make it too irregular or to disperse the camp greatly increases labour, sentries and disorganisation.

All this, however, makes the early arrival in camp of a *large* column imperative. A small column moving "light" or "hard," unencumbered with much transport, can arrive in camp late in the afternoon or it can even arrive in the dark or it can march all night under certain circumstances. But it is suggested that with any large force which may have a large number of camels—since on occasions

this will be unavoidable, and heaven forbid that we should always be tied to a M. T. Road—there are many things besides building a perimeter to do in camp during the hours of daylight. The camp site must be chosen, it must be laid out in some fashion since there must be organisation and method: units of the force cannot be dumped down anywhere and anyhow, otherwise there will be chaos. Animals must be watered, communications improved and exits made. Food has to be issued generally, and cooked for the following day. Troops must get some rest since many of them will be moving out before daylight next morning and will have to be awake at 4.0 a.m. or earlier.

Therefore it is suggested, and as all experience indeed proves, that a column of any size should arrive in camp, when on the move, well before dark.

To increase the length of a march, it is far better to start from camp well before it is light than to arrive after dark.

Yours faithfully,
"LIGHT INFANTRY."

MILITARY NOTES.

BELGIUM.

Changes in armament and equipment.

(a) The two groups of mechanized artillery belonging to the Cavalry Corps, one of which is at present carried in lorries while the other is drawn by Fordson tractors, are both in process of being re-equipped with Latil tractors.

(b) The six Carden Loyd tractors purchased three years ago from Messrs. Vickers are being equipped with 47-mm. anti-tank guns, and when completed will be issued to the *Chasseurs Ardennais* as part of their mechanized equipment.

(c) Trials are still proceeding with a new 120-mm. medium artillery gun, and it is hoped that one group of Corps Artillery will be equipped with this weapon by the end of 1934.

It will be tractor drawn by Minerva-Kegresse tractors, which are being built in Belgium.

(d) Machine-gun units of all arms are being equipped with a simplified form of anti-aircraft sight, closely resembling the French Casaux-Labat type, but produced locally. All guns are also being provided with alternative anti-aircraft mountings.

(e) All rifles are in process of conversion to enable them to fire the Model 30 cartridge, which has hitherto only been used in light automatics and machine-guns.

Military education and training.

For the Staff College examination in 1933 only 35 candidates presented themselves for 20 vacancies. The latter were allotted by arms, four places being kept for the most brilliant candidates irrespective of arm.

A total of 90 candidates were admitted to the Military College during the year, 45 for the Artillery and Engineers and 45 for the other arms.

The number of candidates was about 400.

Formation of Volunteer Cyclist Units.

In order to provide the necessary officers and N.C.Os. for new frontier defence units, the Minister of Defence has called for volunteers from the army.

These units are to be formed at Beverloo Camp where they will undergo five months' preliminary training from 1st March until 31st July. They will be organized eventually in five battalions with headquarters at Maeseyck, Verviers, Vielsalm, Bastogtume and Arlon respectively (with one autonomous company at Maemédy) and subdivided into 18 companies, which will be distributed in eleven different garrisons along the entire Belgian frontier from Maeseyck in the north to Arlon in the south.

CZECHO-SLOVAKIA.

Budget estimates for 1934-35.

Budget estimates for 1934-35 were laid before Parliament by Dr. Trapl, the Minister of Finance, on 6th November, 1933. The new Budget is described in the Press as "The last deflation budget," and general hope is expressed that during the coming year matters will take a turn for the better.

In presenting the budget Dr. Trapl emphasized that the stability of the currency depended on balancing the budget, and issued a warning that in order to do this privations and sacrifices must necessarily be made by all classes.

Expenditure was estimated at 7,630 million crowns and revenue at 7,631 million crowns. The corresponding figures for 1933-34 were 8,632 and 8,634 million crowns respectively.

The principal savings are to be made in the purchase of supplies in all Government departments, by cuts in salaries, and by reductions in various Government enterprises. Additional revenue is to be raised by increasing the scope of the Military Tax which is levied on persons who, on account of health or other reasons, are not held to do military service.

The savings are spread over all departments of State with the exception of the Ministry of the Interior and of Pensions, both of which headings show increases.

Expenditure on National Defence is estimated at 1,541,951,500 crowns (about £14,000,000 at present exchange) as against 1,567,254,000 crowns in 1933-34. This includes in each case the "Equipment Fund" of 315,000,000 crowns.

The latter fund is utilized at the discretion of the military authorities, and expenditure on this head may exceed the stipulated amount in any one year, provided it is adjusted the following year.

In detail, the most striking reductions are in the Votes on account of Aviation and Ammunition. The former is difficult to reconcile with the fact that increases to the Air Force are actually being made, but may be partly accounted for by the fact that public subscription lists for the purchase of aircraft have been opened, and are being well supported.

The principal increases are 20,000,000 crowns on account of Training of Reserves—showing that larger numbers are to be called up this year—and on account of personnel, which shows an increase of 31,874,400 crowns.

The latter is accounted for by the increase of permanent long service non-commissioned officers from 8,500 in 1933 to 11,000 in 1934.

The number of officers and warrant officers budgetted for remains at 10,059 and 8,400, respectively, whilst the number of other ranks is 92,435 as against 91,498 in 1933.

At the time of presenting the estimates M. Bradac, the Minister of Defence, sounded a note of warning and foreshadowed a supplementary military budget, as he considered the present estimates were too low to meet actual requirements.

FRANCE.

Liberation from the Colours of the first half of the 1932 contingent.

It is reported that the first half of the 1932 contingent will be released from the Colours on 29th March next.

These men joined at the beginning of April, 1932, and represent only four months' births (January to April, 1911) instead of the five months normally incorporated each April, as a start was then made towards getting a reserve in hand to help out the "lean" years (1936-40) caused by the war.

Auxiliaries—those men who owing to their low physical or mental standard were only passed fit for auxiliary and not general service—will, however, be retained for a further three weeks from 30th March, which period will count as one of those which they are liable to carry out during their *disponibilité* and reserve service.

These men do little proper military training during their year with the Colours, but are used for the many various menial jobs and fatigues which have to be found by every unit and so allow the better class men to concentrate on their training.

Exceptions will be made in the case of the following auxiliaries :—

(a) Members of the teaching profession, who will carry out their period of training during the school summer holidays.

(b) Those serving with the special units stationed in the two fortified areas on the Palatinate frontier and the Rhine fortified sector, who will do their reserve training under the same conditions as other men belonging to those units.

Organization of the Air Army in War.

The Organic Law of the French Air Army, which was debated and the first 28 Articles of which were adopted by the Chamber of Deputies last November, contained the following provisions as to the constitution of the Air Force in time of war :—

(a) The division between those air formations which will be kept in hand and those which will be put at the disposition of the Army and Navy respectively, will be fixed by the Government in accordance with the scope of the operations.

(b) All air formations kept in hand will be placed under a general officer of the Air Army Commanding-in-Chief, who will undertake the direction of all independent air operations on which the Government may decide. He will also have the right of inspecting all other air formations.

NOTE.—The Army and Navy will also have rights of inspection of all units allotted to them.

(c) The air formations put at the disposal of the Army and Navy—the latter and certain shore-based units must not be confused with the Fleet Air Arm, which are directly under the Minister of Marine at all times—will be commanded by general officers of the Air Army, who will be subordinate to the general officers commanding the land or sea theatre of operations concerned.

(d) All the non-flying portions of air formations (ground and works services, &c.), with the exception of certain special establishments directly under the Air Ministry, will come under the command of the G. O. C. the Air Region in which they are stationed.

Army re-organization.

A recent decree announces the following measures of re-organization :—

(a) The cavalry divisional artillery regiments, of which there is one to each of the five cavalry divisions, will in future consist of two brigades (*groupes*), each with a varying number of batteries, instead of two *groupes* of two batteries as heretofore ; it is further stated that, in view of the proposal to motorize at a future date the whole of the five cavalry divisions, some of these regiments may be motorized, though no other details are given.

(b) There are at present thirteen battalions and twelve autonomous companies of Artillery Labour (Ordnance) units which work in the various artillery parks and ammunition depots throughout France and North Africa. As a measure of economy and to assist workshop output, it is intended to replace some of these by labour personnel attached directly to artillery units. Their total establishment will therefore, in future, consist of eleven autonomous battalions composed of a varying number of companies, one autonomous company and various companies and sections attached to artillery regiments.

*IRAQ.**The Assyrians.*

Considerable progress has been made in the search for a country suitable and willing to take the Assyrians as a whole. Brazil has now agreed to accept them at the rate of 500 families a month, on the condition that no expense would be incurred by the Brazilian Government and that the Brazilian Government would not be responsible for their repatriation should the settlement not be a success.

A commission has proceeded to Brazil in order to examine the proposed area of the settlement and to ensure that it is suitable to the various requirements of the Assyrians.

Although the problem is now appreciably nearer solution, there still remains the question of who is going to pay for the transportation and purchase of land.

Unfortunately, the acceptance of the Assyrian settlement in principle by the Brazilian Government has not been reflected in the Press.

ITALY.

Formation of a Military Alpine School.

A Military Alpine School (Scuola Militare Alpina) has been opened recently at Aosta.

The formal opening ceremony was conducted by the General Officer Commanding 1st (Turin) Army Corps, representing the Under-Secretary of State for War.

General Bes, the inspector of Alpini, and many other distinguished officers were present.

The object of the School is defined as "the promotion, by means of technical and practical courses of instruction, of Italian Military Alpinism and mountain climbing, and the spread of this culture amongst officers and non-commissioned officers."

The school has a fine library of books on Alpine matters generally, and a gymnasium where exercises suitable to mountaineering training are studied and practised.

JAPAN.*Change in Minister for War.*

General Senjuro Hayashi succeeded General Sadao Araki as Minister for War on 22nd January, the latter having resigned owing to ill-health. The new Minister for War was Commandant of the Staff College in 1927 and General Officer Commanding Guards Division in 1929. He became Commander-in-Chief of the Korean Army in 1930 and, at the time of the Manchurian Incident of September, 1931, attracted some attention by the promptness with which he despatched troops to Mukden. To this action his undoubted popularity with the "Young Officers" may in part be attributed.

In May, 1932, General Hayashi became Inspector-General of Military Training. In the Japanese Army this is a most important appointment as the Department of Military Training is independent, and the Inspector-General is responsible to the Emperor alone. This appointment is in accordance with the established custom in Japan that the Minister for War should be a general on the active list.

PALESTINE.

Arab Demonstrations.

The meetings and processions arranged by the Arab Executive for the end of Ramzan took place according to plan. Although these had generally been expected to lead to trouble, the unmistakable determination of the Palestine Government, coupled with extremely bitter weather, successfully cooled the ardour of the demonstrators; and there were no untoward incidents.

PERSIA.*Budget.*

Out of a total budgetted expenditure for the period 21st March, 1933, to 20th March, 1934, of rials 506,904,460, a sum of rials 210,205,000, more than a third of the total expenditure, has been allotted for the upkeep of the Army, Air Force, Navy, Arsenal and Amnieh (Road Guards).

ROUMANIA.*Steps for the suppression of the Iron Guard.*

Following the murder of Dr. Duca by a member of the Iron Guard the Government took vigorous steps to suppress the movement.

Seven principal towns in Roumania were put under Martial Law, and a large number of arrests took place including General Cantucuzeno, who is M. Codreanu's right-hand man. M. Codreanu himself escaped, and his present whereabouts is unknown.

This was followed by the prohibition of the Iron Guard press, and the dismissal from the public services of a number of officials known to hold Iron Guard views. In this connection a number of well-known people, including members of the Court, are accused of having subsidised the Iron Guard funds.

In addition the whole educational system is to be revised, with a view to disciplining university students, who at present enjoy unlimited liberty, and form the backbone of the various subversive movements.

Members of the Iron Guard who were implicated in the Duca assassination plot are to be tried by the Bucharest Military Tribunal, and not by the ordinary civil courts.

SPAIN.

Recruiting.

Orders have been issued for the incorporation during the first three weeks of February of the second group of the 1933 contingent. This consists of 47,975 recruits, of whom 40,750 will serve in the peninsula and 7,225 in Morocco and North-West Africa.

At the same time orders have been issued for the discharge of the men serving in Spain belonging to the second group of the 1932 contingent. These joined the colours in February, 1933, and number approximately 43,500.

Warrant Officers Corps for the Air Service.

A corps of warrant officers and sergeants has been created for the Air Service, of personnel belonging to the engineer arm who were seconded to it. They will have no further connection with the Engineer Corps.

Budget, 1934.

A Law of 29th December, 1933, authorised the Government to apply the respective proportion of the estimates of the 1933 budget—with a few minor adjustments—to the first quarter of 1934, pending the drawing up and approval of a new budget. It was necessary to do this owing to the fact that the new Government took office so late in the year (16th December) that it was impossible to draw up the new figures and obtain their approval by Parliament before 1st January, 1934—which the Constitution requires.

The same law will apply in the case of Morocco and other African colonies.

One or two items of extraordinary credit have also been approved, one of these being ten million pesetas for pensions. This large additional amount is required to pay the pensions of the many officers who retired on full pay during the years 1931 and 1932.

On the 1933 basis the military budget for the first quarter of 1934 will be as follows:—

Home	..	..	105,900,000 pesetas,
Morocco	..	..	39,600,000 „
a total of 145,500,000 pesetas, which is about £5,750,000 at par, or £3,730,000 at the current rate of exchange.			

U. S. A.

Substitution of Motor for Horse Transport in the U. S. Army.

The extensive use of motor vehicles in the U. S. Army has been held up owing to lack of funds to purchase up to date vehicles. The Army up to now has had to rely largely upon worn out lorries purchased during the Great War and has, therefore, retained much of its horse transport. Now, under the Government scheme for increasing employment by large expenditures of public money, the Public Works Administration has allotted to the Army 10 million dollars (£2 million) for the purchase of mechanical vehicles. The Army is taking advantage of this windfall to press on with "motorization," a term which means the substitutions of mechanical vehicles other than armoured fighting vehicles for horse transport; the provision of armoured fighting vehicles being termed "mechanization."

7,776 motor vehicles of all types are to be purchased, of which 1,551 are to be allotted to the Field Artillery of the National Guard, or State Militia, the remaining 6,225 being distributed among the different arms and services of the Regular Army as follows:—

Infantry ..	..	1,484
Field Artillery ..	..	1,811
Cavalry ..	..	438
Coast Artillery ..	..	731
Air Corps ..	..	880
Corps of Engineers ..	..	335
Signal Corps ..	..	147
Chemical Warfare Service ..	..	97
Medical Department ..	..	139
Quartermaster Corps ..	..	67
Ordnance Department ..	..	96
Total ..	..	6,225

In addition 612 sets of adapters for 75-mm. gun carriages are to be purchased. These provide for the fitting of pneumatic tyres to the gun wheels so that the guns may be towed at high speed.

This list shows that motorization is to be widespread throughout the Army, some of the more important projects being the following:—

Cavalry.—The headquarters of the 1st Cavalry Division, with its two active cavalry brigades, and the headquarters of all active

cavalry regiments in the United States and Philippine Islands are to be motorized ; in addition, scout cars are to be provided for all active cavalry regiments.

The unarmoured vehicles required by the 1st Cavalry Regiment (already mechanized) are to be provided. This should help on the work of this regiment, which has been held up owing to the lack of suitable modern equipment.

Field Artillery.—Mechanical tractive power and gun carriages modified for high speed traction are to be provided for all the 75-mm. batteries in Hawaii and the Philippine Islands, and for approximately half the 75-mm. batteries in the United States, probably 39 batteries in all ; also for a battalion of 75-mm. guns to work with the mechanized cavalry brigade. All medium and heavy field artillery units are to be provided with mechanical tractive power.

Reconnaissance vehicles are to be provided for all units.

Infantry.—Extensive motorization is to be carried out in the infantry, especially in the headquarters of all formations down to regiments ; the machine-gun and howitzer units of the 1st Division, the 30th and 38th Regiments and the 2nd Battalion of the 29th Regiment are to be motorized.

The army has already placed contracts for a number of the vehicles required and will press on with the scheme with all speed with the double object of completing the motorization programme early and of accelerating the government employment scheme.

Annual Report of the Chief of Staff of the U. S. Army, 1933.

The Annual Report of the Chief of Staff of the U. S. Army, General Douglas MacArthur, submitted to the Secretary of War, has recently been published.

The report emphasizes the great social and economic changes which have been initiated in the United States during the past year, which have affected the army in many ways. A considerable amount of attention is devoted to the activities of the army in organizing and running the Civilian Conservation Corps for the employment of 300,000 unemployed youths in forest camps throughout the United States. The Chief of Staff takes a natural pride in the efficiency with which the army has carried out a difficult task and compares the case with which the recruits for the Civilian Conservation

Corps were handled in 1933, at one time at the average rate of 8,500 per day, with the excessive cost, confusion, delay and inefficiency which attended America's mobilization in 1917. He acknowledges the value to the army of the Civilian Conservation Corps as a practice for mobilization, but at the same time he points out that all the normal activities of the army had to be set aside in order to carry out this special task, all army schools had to be closed down, many units were denuded of officers, and many training activities suspended, especially in connection with the National Guard and the Reserves. Naturally this state of affairs could not be allowed to continue and orders have since been issued for the return of all regular officers to normal duty, their places with the Civilian Conservation Corps being taken by reserve officers.

The exceptional economic situation in the United States led to reduction in the military budget. The Chief of Staff describes the heavy cuts in the appropriations proposed by the Director of the Budget and the efforts of the War Department to resist the cuts.

Eventually the following figures were authorized:—

War Department Budget for 1933-34—

	Million dollars.	
Military activities	..	225
Supplementary Budget	..	4
Total	..	<u>229</u>

After the passage of the Budget, however, the Government introduced the policy of large expenditures on public works as a method of producing employment and from this source the following sums were made available for military purposes:—

	Million dollars.	
For building and repairing barracks	..	56·0
Searchlights	2·0
Coast defences	7·0
Aircraft	7·5
Ammunition	6·0
Purchase of motor transport	..	10·0
National Guard buildings	..	2·3
Total	..	<u>90·8</u>

If this sum is added to the Budget, it brings it up to approximately the same figure as the previous year.

Future trends in the organization, training and equipment of the army are dealt with at considerable length. The general tendency is towards greater mobility and increased fire power, but, owing to various factors, including expense, it is impossible to keep a sufficient supply of up-to-date vehicles and weapons available for war. The policy of the United States is to carry out research and experiment, and produce only sufficient models to enable tests to be carried out and to maintain a few units satisfactorily equipped for emergency use, and, on the outbreak of war, to initiate manufacture in the most modern types.

In the infantry semi-automatic shoulder weapons and very light machine-guns will eventually replace the present armament. With the increased fire power given by these weapons it may prove possible to reduce the war establishment of units. A more definite re-alignment of infantry formations into light and heavy elements, corresponding to the weight of unit armament and tactical functions, may possibly be indicated.

Increased use of motors will give greater infantry mobility on the march, and on the battlefield tanks will help them to pass through the band of enemy fire.

The Cavalry must also study mechanization. At present this study is being carried out on two lines. The 1st Cavalry at Fort Knox has been totally mechanized and the horse eliminated. It is intended to form a mechanized brigade. On the other hand experiments are being made with cavalry regiments fully equipped with motor transport and having allotted to them light scout cars and possibly a few fighting vehicles, the horse being used only to carry the cavalry combat soldiers and the weapons normally supplied to cavalry formations.

In the Artillery great advances have been made in fire power and mobility since the war. With the indications that the tactical and strategical mobility of the Infantry are likely to increase, there arises a need for greater mobility for all field artillery weapons. Within recent years an artillery carriage, fitted with pneumatic tyres, has been developed which enables field guns to be towed at high speeds without damage to their mechanisms. In combination with this

important invention improved tractors and lorries will soon enable all Field Artillery to be equipped with motor transport.

The Air Corps has continued to improve its equipment. Approximately one-fifth of the Army Budget is expended directly or indirectly on this corps, which shows the importance attached to it.

The Chief of Staff deduces from the modern tendency towards mechanization, that any major war of the future will see a swing away from the ponderous fighting forces engaged in wars of the past 75 years towards mobile, highly trained and very powerful, though somewhat smaller, formations.

Under the heading "Factors affecting morale" the Chief of Staff deals with questions of promotion and pay, both of which subjects are causing the War Department anxiety. The United States Army has a different system of promotion from the British Army, all officers below the rank of colonel, except officers of the Medical Corps and Chaplains, being on a single promotion list, on which promotion is carried out strictly by seniority. Owing to the large number of officers brought into the regular army as captains and lieutenants immediately after the war, 5,000 within two years, a very serious block in promotion exists. This is known as the "hump" and owing to its existence a large number of officers will still be captains when their seniors with very little more service are colonels. The War Department has prepared a scheme to deal with this abnormal promotion situation and the Chief of Staff urges its adoption by Congress.

The pay of officers and other ranks in the United States Army was reduced last year by 15 per cent. on account of the economic situation. The Chief of Staff urges the restoration of this cut in view of the increase in the cost of living. However, he says that the reduction has been loyally accepted by the Army but there are other economy measures which have acted unfairly and have caused considerable resentment. The factor of length of service plays an important part in officers' pay, increases of pay being granted at certain fixed intervals. Under an act of Congress, known as the "Pay freeze," all automatic increases of pay were stopped with effect from last year. Such an order obviously works most unfairly, affecting some officers much more than others. The Chief of Staff, therefore, urges very strongly that it should be discontinued.

As regards the men the 15 per cent. cut falls heavily on the lowest ranks, and many of the men whose pay has been reduced to \$17.85 a month are employed as cooks, clerks or orderlies in the Civilian Conservation Corps Camps where the unemployed youths who join the camps without any qualifications or any obligation to serve for a long period receive \$30 a month. The bad effect on discipline and morale is inevitable.

In his "conclusions" at the end of the report the Chief of Staff says, "In the obvious state of unrest now prevailing throughout the world, evidences of which are plainly visible even in our own country, an efficient and dependable military establishment, constantly responsive to the will of its Government, constitutes a rock of stability and one of a nation's priceless possessions. As much as at any time in our history, the Army's efficiency should engage the earnest attention of every loyal citizen. It is my conviction that at this moment the Army's strength in personnel and material and its readiness for employment are below the danger line. I consider it of the most urgent importance to the United States that this condition be obviated without delay."

REVIEWS.

Four Score Years and Ten.

BY GENERAL SIR BINDON BLOOD.

(C. Bell & Sons, Ltd., London, 1933.) 16sh.

General Sir Bindon Blood, G.C.B., G.C.V.O., Senior Colonel Commandant of the Corps of Royal Engineers, is one of the most distinguished of a very distinguished line of soldiers who have made efficiency in war and in sport a tradition of the Roorkee Sappers.

Born in 1842, Sir Bindon Blood joined the army in 1860, and his active soldiering ended in October, 1906, when he retired on completion of his tour as G.O.C., Punjab Command, after 46 years of active soldiering.

What years those were for a sportsman and soldier! India and Delhi in 1871: Roorkee in the days when tigers and wild elephants wandered within a few miles of cantonments: campaigns on the frontier: in Zululand: South Africa: Kabul and Kandahar: Tel-el-Kebir: the Chitral Relief Force: Swat: Buner: South Africa. The names alone are enough to stir one's heart, and Sir Bindon was the man to get the best out of them all.

They were harder men in those days, I think, than we are now. Which of us now would like to ride out 20 miles in the morning, shoot 40 couple of snipe, and ride back again in time for dinner? How many of us would consider a 40 mile ride home in the middle of the hot weather a normal ending to a shoot? But Sir Bindon seems to have taken this sort of thing as a matter of course.

I read the shooting part of the book with much interest but not without some regrets. Why was one born into the world just 40 or 50 years too late? What a country India must have been in those days, when week-ends began on Friday and ended on Monday night and when there were more tigers than congressmen in the country!

Another regret is connected with the book itself, and is perhaps an over-critical comment. It seems to me that, talking entirely of the sporting part of the book, it deals far too much with results and far too little with the means which led to success. The lesser interest in big game shooting is the number of beasts shot and the actual killing. The major interest, to most of us at least, is the skill and wood craft

which brings the game to the gun. Even in those palmy days, I take it, one could not get tiger merely by beating by chance through likely patches of jungle. Jungle lore and wood craft there must have been, therefore, but of these the book tells us little.

Again, I think, these enormous shoots, with 50 elephants or more in line, in the Nepal Terai are poor things to read about. We in these modern days do not see much of this, but I do think the few odd tigers that we get on our small scale shoots are worth far more than those rounded up with a vast line of elephants, and that is why, I think, most of us will enjoy Sir Bindon's earlier experiences best.

A more serious military reader will find lots to interest him in the stories of the various campaigns which the author describes from the inside ; there is more to be learned from this sort of thing than from most of our more serious military history.

The frivolous side of life has not been altogether neglected. I specially like the story of the beautiful Calcutta lady who was not prepared to enter into competition with the Simla amateurs !

This is altogether a most interesting book and a remarkable production for a man of 90.

E. J. R.

The Gallant Company.

By H. R. WILLIAMS.

(*Angus and Robertson, Ltd., Sydney, 1933*). 6sh.

The "Gallant Company" is yet another war book. The author is an Australian who describes the adventures of himself, his friends and the units he served with in Egypt and France. It is a plain, unvarnished tale of the routine of war, vibrating with sincerity and as accurate and truthful as a well-audited balance sheet ; and it must be confessed almost as dull to read through.

Page follows page in which trenches, battles, mud, escapades, heroisms and hardships are described. The only relief to which are tales of horse-play and cheeriness in billets and on courses, or rather emasculated descriptions of experiences in the shadier parts of Cairo or on "Blighty" leave.

This is a book inevitably for Australians, for other British troops are hardly mentioned ; this failure to notice the efforts of others is a

common factor among writers of "personal reminiscences" of the Great War.

On the whole, "The Gallant Company" may be said to serve a useful purpose as a balanced and very typical account of an average soldier's experiences in a unit, which, by being so balanced and typical, are really rather tedious to wade through.

J. A. C.

The Grey Battalion.

BY MAY TILTON.

(*Angus and Robertson, Sydney*). 6sh.

In Miss May Tilton's hands "The Grey Company," a diary of her own war experiences as a sister in the A. M. N. S., depicts very cleverly what war means to everyone. She brings vividly back those years of the Great War to all who knew them and to those who had not the experience of the Great War shows something of the pluck and high courage of our men in their great hardships and sufferings, and the comfort and support "The Grey Company" was to those with whom its members came in contact.

Miss May Tilton's wide experiences are told so skilfully that one can visualize much. An added note of colour is found in the descriptions she gives of the places she visited.

E. V. F.

Outram's Rifles.—A history of the 4th Bn., 6th Rajputana Rifles.

By H. G. RAWLINSON, C.I.E.

(*Oxford University Press, Bombay, 1933*), Rs. 10/-.

The history of a unit which was the military nursery of such outstanding figures as Outram, Gatacre, Scallon and Delamain is of more than usual interest to the Army. In entrusting its compilation to H. G. Rawlinson, C. I. E., a happy choice has been made. The narrative is lively and sustained, its thread remaining unbroken by the avoidance of too much detail.

The result is an eminently readable book abounding in interesting, and occasionally, thrilling episodes. So widely has the unit been employed that in its career in the 19th Century may be traced the history of the Indian Army during that period. On these grounds the book merits a wide circulation.

The history touches on two matters of topical interest. The first is the much discussed subject of "light" infantry, mobility, etc. Outram's pursuit of rebels near Surat in 1825, when he led 200 men 37 miles in 7 hours, gives an interesting example of light infantry at its best. A further case occurred in the Mutiny when the unit marched 58 miles in 38 hours to head off a rebel cavalry force. These are only two of many striking war performances.

The second matter of present day interest is the class constitution of Indian Army units in the old days. Prior to 1888, Jews, Sikhs, Marathas, Christians, Rajputs, Pardeshis and Mohamedans of every kind were enlisted. Caste and religious differences appear to have had no adverse influence.

E. W.

Elementary Tactics, Volume II.

BY LT.-COL. R. P. PAKENHAM-WALSH, M. C., AND
MAJOR E. E. DORMAN-SMITH, M. C.

(Sifton, Praed & Co., Ltd., London, 1934) sh. 10/6.

The authors are to be congratulated on producing a book which should be of great assistance to officers in studying their profession and when working for the Staff College and promotion examinations. Their object has been to demonstrate the principles laid down in the training manuals and they have produced situations dealing with a very comprehensive set of problems which may confront commanders in war from a brigade commander downwards. Sound solutions to these problems are included and the authors rightly stress that these can only be taken as a guide. These solutions do not claim to be the best, much less the only ones. Full value will only be obtained from these schemes if officers are sufficiently well acquainted with principles laid down in the manuals to make up their own mind: the suggested solutions can then be used as a basis for comparison and discussion.

The authors have wisely drawn attention to the necessity for keeping up-to-date with the amendments which are issued periodically to the training manuals, and have included amendments necessitated by official decisions up to July 1933. They do not however seem to have taken cognizance of the amended Chapter XII of F. S. R. Vol. II,

as in several places orders and instructions include "ACKNOWLEDGE," whereas the acknowledgment of orders and instructions is now a matter of routine. The book is complete with maps and diagrams: some of the latter are however on the small side and might easily be mislaid. In the next edition the authors might well be advised to print these diagrams on larger sheets of paper.

F. B. W.

The Fighting Cameliers.

BY FRANK REID.

(*Angus and Robertson, Sydney, 1934*), 6sh.

The conditions among which the Imperial Camel Corps fought in Sinai and Palestine are ably described in this book. The Imperial Camel Corps Brigade formed part of the Eastern Force and was made up of eighteen companies (ten Australian, six British and two New Zealand) organised into four battalions with an Indian Mountain Battery of six guns. The brigade itself was organised as a self-contained unit capable of being independent for five days in desert warfare. The diversity of nationalities among its members, their trials and achievements, makes their exploits comparable with those of the French Foreign Legion. The author emphasises the weariness of desert warfare and gives an interesting description of the intense weariness of the night ride back from Magdhaba on 23/24 December 1916, when the Brigade rode 50 miles and fought a stiff action in a little more than 24 hours.

Though the book does not aim at being a historical record of the doings of the Imperial Camel Corps Brigade, and although it is mainly a personal narrative, it loses none of its interest thereby. The adventures of this Brigade during the three battles of Gaza are accurately described.

The latter part of the book refers to the operations in the Jordan Valley before the Brigade was finally disbanded and is retold in a series of amusing adventures.

The author has given an unbiassed account of the atmosphere in which these operations were conducted, and perhaps the most pleasing feature, particularly to service readers in this country, is the tribute paid to the Indian Mountain Battery who served throughout the campaign and were dubbed the "Bing Boys" by the men from "down under."

E. W. L.

Wild Game Preservation in India.**ANNUAL REPORT (1933) OF THE ASSOCIATION FOR THE PRESERVATION OF GAME IN THE UNITED PROVINCES.**

Everyone who takes an interest in sport or natural history must realize the appalling extent to which the stock of wild animals in India, especially in the United Provinces, has been depleted in the last few years.

In government forests, thanks to an efficient department and a well devised set of rules, the position is somewhat better, but outside these reserves, conditions are truly appalling and in many tracts game has been practically exterminated.

This is, of course, due to two main factors. Firstly, the apathy of government, which, outside government forests, has done little to fulfil its trust in this respect and secondly, to the complete lack of a healthy public spirit to take the place of rules and regulations.

At last, thanks to the activities of the Association for the Preservation of Game in the United Provinces, something is being done in the matter. The Association is working hard with two main objects in view. Firstly, to induce government to fulfil its responsibilities as the custodian, on behalf of the country, of its wild fauna and, secondly, by propaganda, to awake a healthy public spirit on the subject.

The Association, as it now stands, however, is not in a position to accomplish very much. Its members are too few and not sufficiently representative to achieve the objects in view. It cannot, in our opinion, fulfil its objects effectively until its membership includes practically all sportsmen in the country and until every district has its committee with a strong set of laws behind it to furnish the basis for action.

In our opinion, effective legislation on the following major points is required, and required immediately if the wild fauna of India is to be saved :—

- (a) The sale of horns, hides and meat of game animals must be made definitely illegal at all times unless the seller can prove that they were shot under a license.
- (b) The closing of all destruction of animals and birds both within and without government forests, except under special permit.

(c) The enforcement of a definite close season for all animals and birds in all parts of India.

(d) The complete closing of all destruction of animals within certain areas until recovery has been effected.

We should like to see similar legislation extended to fish with regard to which the situation is equally serious in many parts of India.

In these democratic days legislation can only be founded on public opinion and is, in fact, useless without it.

We therefore urge on all the importance of joining this Association and of assisting to form an educated public opinion which will not only induce government to produce the necessary legislation but which will ensure that such legislation, if introduced, will be properly enforced.

Chiefly through the activities of this Association, an All-India Conference for the Preservation of Wild Life is to be held at Delhi in December. This will be on an all-India basis and it is hoped that it will represent all Provinces and all important States.

It is hoped that all our readers, will interest themselves in this Conference, for only if it is representative of all classes and all parts of India can it be effective.

Mr. Hasan Abid Jafry, Butler Palace, Lucknow, is the Secretary both of the Association for the Preservation of Game in the United Provinces and of the All-India Conference, and those interested should make a point of communicating with him.

E. J. R.



HIS EXCELLENCY SIR MALCOLM HAILEY, G.C.S.I., G.C.I.E., I.C.S.,
Governor of the United Provinces of Agra and Oudh.

The Journal

OF THE

United Service Institution of India.

Vol. LXIV. OCTOBER, 1934. No. 277.

The views expressed in this Journal are in no sense official, and the opinions of contributors in their published articles are not necessarily those of the Council of the Institution.

EDITORIAL.

The essay competition of the United Service Institution, commenced over sixty years ago, continues to excite only moderate interest among our members. For the last ten years the average number of entries received has been less than twenty *per annum*, a poor return for all the trouble taken by the Selection Committee and the Judges. We would like to impress upon our readers that the object of the essay competition is to elicit views and opinions on pressing Indian affairs—particularly military affairs, since military members are predominant among our subscribers,—and that the essayist may give pen to his most free and candid expression under the sanctity of his *nom de plume*, which is known to the Secretary only, and then only after the essays have been judged.

In an attempt to attract more competitors two essay subjects have been chosen for the last two years, one being a technical and the other a more general subject. The experiment, we regret to say, has met with no success. The total number of essays received in both subjects has actually been less than if one subject only had been chosen, and the difficulties of the Judging Committee have been increased enormously. As one of the last judges pointed out to us: "You request me to adjudicate between the merits of the two best essays, one on "Light Tanks," and the other on "Light Women;" both are excellent essays on their respective subjects, but to which author should the Gold Medal be awarded?"

Fortunately this year, in spite of this difficulty, the three judges were unanimous in placing the essay by Major C. M. P. Durnford, under the pseudonym of "Tam Marte Quam Minerva," first. This essay is reproduced in this number of the Journal. We cannot agree with all the conclusions of the author, particularly with his disregard of internal Indian politics, which affect so profoundly Frontier activities, and to a lesser degree with his generalisation of tribal character north of the Gomal; yet we have the greatest satisfaction in placing before our members an honest, studied and sensible comparison between French and British methods of Frontier control, which should enlighten the ignorant and encourage the faint-hearted.

In our January 1935 issue, we shall publish the best essay received on the alternative subject: "It is often said that Indians are by nature divided into what might be called martial and non-martial races This is a mere myth." The author's pseudonym is "Jamshed."

For the competition next year one subject has been chosen (see page xix).

We feel it is time that an opportunity should be given for expression of our air-cum-military-cum-naval-cum-political differences. Far too many soldiers and airmen are suffering from inhibited complexes, and this essay should give scope for ventilation of a subject which needs open windows.

Our readers will forgive us, we hope, when we fall back upon a Victorian *cliché* and state that the present European situation baffles description. Things move so fast, tumultuous events follow each other so quickly, weekly crises confound the critics, and swift, mysterious policies confound the politicians so completely, that there seems to be left very few standards either to hold or to wave.

The genesis of this state of international affairs lies in the clauses of the Treaty of Versailles, and the fruit has been borne by the League of Nations. One ought not, perhaps, to speak ill of the moribund, but the League, founded on artificial foundations, was bound sooner or later to collapse and even its most fervent supporters can hardly deny its present pitiful dissolution. Article X of the Treaty ordained that members of the League should "undertake to respect and preserve as against external aggression the territorial integrity and existing

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Situation.**

political independence of all its members." Article XIX of the same Treaty provided for revision of the Treaties. Between these two stools the League has fallen, and the result is a chaotic *impasse*, even less controllable and more ineluctable than the situation twenty years ago. The ordinary individual may be pardoned for asking if this state of affairs is all that the modern post-war system of conducting domestic and world affairs can produce after fourteen years. Whether the old pre-war methods were better than the post-war may always be a matter for argument, but, up to the present, self-determination, open diplomacy, conference methods, leagues, pacts, protocols, and all the rest of the new-fangled ideas, can only be said to be melancholy failures.

Mr. Lloyd George devotes several volumes of his book on the War to abuse of the military leaders of allied and enemy countries alike, and in a work more than usually full of 'I,' even for a politician, implies that he would have won the war far sooner, if the allied soldiers had taken his advice. He, however, was largely responsible for the Peace Treaty and subsequent events, and if we had failed in the War as dismally as the statesman has failed in the peace, even the most self-satisfied General could have found little to say for himself.

As in July 1914, the nigger in the present wood pile is Germany, but, fortunately for peace, a poverty stricken Germany. The Teutonic sabre-rattling may for the present be discounted. With winter approaching grave economic distress will be prevalent. Her financial position is weak, unemployment figures are increasing and if the Mark crashes again the door will be open for Communism and Bolshevism. Hitherto, Germany, however much we may disagree with Hitler's methods, has acted as a sanitary cordon between Bolshevism and the rest of the world.

But Hitler's methods are antagonising European and world opinion. Recent Nazi history, horrible as it is in its brutality and defiance of ordinary civilized constitutional methods, has taught Europe that if Hitler was Chancellor and Dictator of a rich Germany he would only be too glad to go to war to-morrow against his imaginary enemies of the Fatherland. With Nazism at present nothing seems to succeed like excess, and hampered as the movement is by lack of arms and money it has had to resort to mediæval terrorist and modern gangster methods. Up to the present Hitler has succeeded internally. He has cleared Germany of Communists, Jews and the Opposition

Party, all of whom he deemed to be enemies of his country. Any outside criticism of the methods he employed he ignored. He raised Wotan and Thor as the Gods of the great third *Reich*, and by thunderous broadcast and prophylactic propaganda he persuaded 90 per cent. of the German population (about 63 millions) to worship them.

Externally, however, Nazism is suffering a decline, and in this fact lies the only hope for European peace. It will be remembered that Hitler's first item in his Nazi programme was the *Anschluss* with Austria, by which he meant the fusion of the German-speaking races in Central Europe into a composite body ready to absorb or subdue the neighbouring weaker States. A Nazi Federation was visualised, consisting of Germany, the Germanic minorities of Austria, Hungary, Czecho-Slovakia, Poland, the Baltic States, the Ukraine and parts of Belgium and Switzerland; a racial hegemony which only Charlemagne, Napoleon or the authors of the Indian White Paper could conceive.

The peculiarly foul murder of Dollfuss has burst the *Anschluss*, perhaps only temporarily, but effectively enough to thwart Nazi ambitions in Austria and bring about a reaction in public feeling which may give a very necessary pause to external Nazi activities and an opportunity for its prospective foreign clients to weigh its implications. Signs are already apparent in Austria that the murder of the Chancellor has swung the pendulum definitely towards a more consolidated public feeling for Austrian independence and a return—if this is necessary to ensure independence—to the Hapsburg monarchy. In the Saar, in Malmedy and in Eupen—all pro-Hitler six months ago—there are also signs of reaction. Therefore, it might be summed up that what Herr Hitler has won on the German swings he has lost on the European roundabouts.

The French reactions were to be expected. Basing all their arguments on their consistent formula "*securité*"—which means, in effect, a constant preparedness for war on land or in the air—the French continue to be uncompromising realists. They cannot trust Germany, and only with the greatest misgivings do they trust those whose trust they must depend upon for their safety if attacked. In Italy the death of Dollfuss produced a typical Mussolini-like strong gesture—partial mobilisation. Italy cannot afford to allow Austria's absorption into the German Reich—(increasing the German potential army by twelve army corps, the control of the Brenner Pass, the

encirclement of Czechoslovakia and a short hundred-mile access to the Adriatic)—so Italy acted interestingly and convincingly. Nor did Mussolini lose any time in effecting an alliance with Dollfuss' successor, Dr. Schuschnigg.

In England the reaction was characteristically common place, but none the less profound. Following upon a Press campaign for a substantial increase in the Royal Air Force—a vital necessity realised for some time by responsible ministers and those in charge of Imperial Defence but deferred far too long on the easy ground of that distressing but almost universal complaint, financial stringency—the National Government at last sanctioned an increase of 41 squadrons. Of even more significance was the recent pronouncement of the acting Prime Minister, Mr. Baldwin, who declared that the Rhine and not the cliffs of Dover, was our defensive line ; that in the event of a European War the safety of England depended upon our occupation of continental territory. This has given rise to great journalistic objurgations in the cheaper and popular press, which remains as ever impervious to or ignorant of our island history. Hundreds of years before aeroplanes were thought of the British Army fought in the Netherlands. Why ?

In this welter and tumult of international politics and rumours of war the remark made to a Mr. H. R. Knickerbocker by several foreign statesmen is interesting. Mr. Knickerbocker, lecturer to the Royal Institute of International Affairs, Chatham House, London, recently toured Europe and declared that "No less than fifteen European statesmen ended their discussions of the prospect of war in Europe with the statement, "It all depends on Great Britain*" What does, if we may ask such a question, Great Britain depend upon ?

We realise fully that there are several units and formations in the Army in India to whom the mention of the words **Oil Cookers.** "Oil Cooker" is sufficient to produce harsh comment ; they have been the necessary dogs on which a new experiment has been tried ; but it may be of comfort to them to know that, as a result of these experiments, the Army in India will, within two years, be equipped with oil cooking equipment and be the first Army in the world to be so supplied.

* "The Danger of War in Europe."—*International Affairs*, July-August, 1934.

This is a great step forward towards mobility, and apart from the Napoleonic dictum that an army marches on its stomach—(it is a moot point if Napoleon ever envisaged a modern Briton's stomach),—the production of the new "G. C. F. Oil Cooking Equipment" will reduce considerably and effectively the supply "tail" which now almost steers the Army war dog.

The introduction of this new type of cooker will effect material savings in transport. The British troops ration of seven pounds includes three pounds wood fuel; the Indian troops ration of five and a half pounds includes two pounds of wood fuel. The fuel portion of this ration will now be replaced by an oil fuel issue which works out at eight ounces per head. Only those, perhaps, who have seen convoys of camels carrying the wood fuel ration on the frontier and been responsible for their safe conduct will appreciate the great value of this drastic reduction in weight. Besides, the loading, storage, handling and issue of oil will be far simpler, more accurate and quicker than the old wood supply. So far as I.A.S.C. supplies are concerned the saving in transportation lift and charges will be approximately 25 per cent. from the base or centre of production to the S. R. P. in the field. Forward of the S. R. P. the saving in transport is problematical especially in England where an oil cooker M.T. trailer (capable of supplying 500 men) has been adopted; but in India the Army is being equipped on a platoon basis with the equipment carried on first line transport and capable of accompanying the unit at all times. The Army in England has its own problems, but in India the platoon basis equipment is obviously the correct method, as it ensures in Indian operations that food will be available at all times for isolated detachments and its accessibility will maintain the physical fitness and morale of the men.

The invention of the actual cookers must be blamed on Army Headquarters, India. After several years of wandering thought it was decided that the necessary cooker must fulfil two requirements:—

- (a) A platoon equipment, plus the platoon's uneaten day's rations, should be not more than one pack mule's load, and
- (b) A company's equipment, plus the uneaten rations, should be capable of carriage in an A. T. Cart.

The markets of the world were searched to produce the necessary burners, but fruitlessly, and in the end A. H. Q. decided to

make them. It is of interest to know that the cost of the most suitable commercial product was £25, and we in India have now invented a more suitable design (*plus* equipment) for about £5. As the Army will require some five thousand sets the saving is considerable. For various reasons the cost of oil cooking equipment in peace will be slightly higher than if wood fuel were used, but, on the other hand, it has been estimated that six weeks of war will effect sufficient savings on the old methods to pay for the Army's present projected equipment.

In July 1932, following on the decision to start an Indian Military Academy at Dehra Dun and to create an Indian Air Force, Government issued a *communiqué* in which they said that the adoption of these measures provided a suitable occasion for making certain changes in organisation. The important change, and the one which created such a stir recently in the Indian Legislatures, lay in the words :

"It has, therefore, been decided, with the approval of His Majesty the King, to confer upon cadets passing out of the Indian Military Academy, and also upon entrants to the Indian Air Force, commissions in His Majesty's Indian Land Forces and His Majesty's Indian Air Force, respectively, in a similar form, for instance, to those now granted to officers of the Canadian Forces."

This first conferment of Dominion Status upon India so embittered those Indian politicians who have been agitating for such status for 15 years, that a political crisis was almost provoked. Fortunately for the future of Indianisation, the persuasive tongue of the Army Secretary in the Legislative Assembly and the plain speaking of His Excellency the Commander-in-Chief in the Council of State induced both Houses to pass the Bill. It is now law.

The acrimonious debates which nearly submerged the Bill's passing throw a curious light on some Indian politicians' mentality. The Leader of the Opposition declared : " We do suffer from inferiority complex : there is no doubt about it."* Another prominent speaker said : " I am very suspicious about the Government's intentions and *bona fides* in the matter. I fear that they are trying to smuggle through this Legislature a measure designed to keep India in chains and fetters till posterity.....I am prepared to give the

* Legislative Assembly Debates, Vol. VII, No. 6, p.1470.

Britishers a Department like Archæology, because they are very good explorers, I am prepared to give a Department like Education ; I do not mind the help of these people, but India for her self-defence must be self-independent (*sic*). Mr. President, I would like to retain the Army under Indian control, and even for a single moment I would never be a consenting party to anything leading in the direction of non-Indian control.”*

The speaker conveniently overlooked the fact that both Indian Archæology and modern Indian Education are British institutions—now transferred, but in such quibbles we are not interested. The main and gravest aspect of the debate is the effect it had, and may continue to have, on uninstructed public opinion in general and—more particularly—on the outlook of the young cadets in Dehra Dun. The Commander-in-Chief’s speech in the Council of State dispelled suspicion and restored the debate to some appearance of reality.

Let us briefly examine the import of this Bill.

(a) The Dehra Dun Cadet will now be granted a Dominion Commission and not, like his predecessors from Sandhurst, the King’s Commission as held by the officers of the British Army and British Officers in the Indian Army. The Cadet will hold the same commission as the officers of the Australian, New Zealand or Canadian Forces. Ask a Canadian or an Australian if there is anything derogatory or anything leading to “inferiority complex” in that. The reply, we are certain, will be illuminating and probably incandescent.

(b) The commission will carry complete reciprocity as regards powers and privileges *within* the Indian Army with the commission in His Majesty’s Forces held by officers, British and Indian, trained in England. Thus in the Indian Army British officer and Indian commissioned officer will be on a level. This seems to us a perfectly honest and even generous gesture of His Majesty’s Government’s determination to ensure that Indianisation shall proceed as smoothly as possible. The political objection, which led to the dog-fight in the Assembly, arose over an attempt in the Legislature to usurp the King’s prerogative and to force into the Indian Army Act a section dealing with powers of command. Willing as the British are to sympathise with Indian aspirations they have not yet envisaged any Indianisation of the British Army ; but that, in effect, is what the opponents of the Bill declared as their right.

* *Idem* pp. 1881-1882.

(c) This brings us to the expression "mixed formations," which was a principal target in the debate. The fuss was due to the fact that the Indian Commissioned Officer's commission does not give automatic power of command over the British Army in India. Why on earth should it? No Dominion commissioned officer has this power, and why, therefore, should it be given *ab ovo* to a class of officer that does not yet exist? Appreciating, however, the sensitiveness of Indian political opinion on this matter, His Majesty's Government have agreed to issue a King's Regulation to allow the Commander-in-Chief or other commanders down to a station commander authorising an Indian Commissioned Officer to exercise powers of command over British personnel of the British Army when such a thing is necessary. This should ensure harmonious co-operation of the British and Indian portions of the Army in India. In any case we cannot foresee within the next fifteen or twenty years when this question of command of a mixed formation will become a real issue; by that time the cadet from Dehra Dun will have proved himself.

We are afraid that this political incursion into Army policy has done the work of Indianisation little good. There was too much hysteria and too much ill-balanced judgment about it. The other side of the picture may be seen in Brigadier Collins' Lecture on the Indian Military Academy published in this number. If the Dehra Dun cadets live in their regiments up to the reputation they have gained at Dehra Dun, they will soon refute the jeremiads of their political "well-wishers" in the Legislatures, and in this, perhaps needless to remark, they will receive every support and encouragement from their British colleagues.

THE GOLD MEDAL PRIZE ESSAY, 1934.

The Judges appointed for the 1934 Competition, viz., Lieut.-General Sir Henry E. ap Rhys Pryce, K.C.B., C.M.G., D.S.O., Mr. H. A. F. Metcalfe, C.S.I., C.I.E., M.V.O., I.C.S., and Colonel A. E. Grasett, D.S.O., M.C., have given first place to the essay submitted by Major C. M. P. Durnford, 6th Rajputana Rifles. The Council of the United Service Institution of India has, accordingly, awarded a gold medal to Major Durnford.

The Essay submitted by Major General E. C. Alexander, C.B., C.I.E., D.S.O., Indian Army, was placed second in order of merit.

SUBJECT.

“The problem of the French in dealing with the tribes on the Southern and Eastern frontiers of Morocco, in the mountainous region of the Atlas, is in many ways similar to ours on the North West Frontier of India.

Contrast the two methods of control and administration and state in some detail what is, in your opinion, the best system of defence and control of the North West Frontier of India (from Chitral to the Persian Frontier inclusive).”

BY MAJOR C. M. P. DURNFORD, 6TH RAJPUTANA RIFLES.

In this paper* the above subject is considered under the following five main headings:—

1. The general similarity between the French problem in Morocco and our own on the North West Frontier.
2. The outstanding difference between the two problems.
3. French methods of control and administration in Morocco and the progress of French effort.
4. Our own methods of control and administration on the North West Frontier of India.
5. Suggestions for an improved system of defence and control on the North West Frontier of India.

PART I.

THE GENERAL SIMILARITY BETWEEN THE FRENCH PROBLEM IN MOROCCO AND OUR OWN ON THE NORTH WEST FRONTIER.

After a long and troublous history of piracy in the Mediterranean and of outrage on its southern shores, the French were forced to establish

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themselves in Algeria in 1830. They came there for the protection of their traders, but their arrival was the signal for the collapse of the decadent administration with which they had come into conflict. Hostility to their presence and the impossibility of finding or founding any uncorrupt and stable local government, compelled the subjugation of the country—a process which took some forty years to accomplish, delayed as it was by various governmental changes in France and by wars elsewhere during the same period.

Once fairly established in Algeria, however, the French found themselves in contact, on their Western Frontier, with yet another State, backward in civilisation and governed by the decadent legatee of a medieval system. This State was the Sultanate of Morocco. Where the mutual frontier of two adjoining countries—one decadent and ill-controlled, the other under the government of a modern civilisation—runs through unmapped territory, which in many areas has no well-defined physical features, it is obvious that many factors are present which make for the growth of friction.

On account of the jealousy of other Powers, the French in Algeria were refused the logical frontier which they claimed along the river Muluya and they were not long in finding the ill-defined boundary which was imposed upon them to be incessantly the scene of raids by nomadic tribes, whose bases were safely within Moroccan territory but whose traditional grazing areas lay in country admittedly under French control.

The authority of the Sultan was purely nominal in the outlying districts of Morocco and in their endeavours to stabilise their frontier the French were in a quandary. The Quai d'Orsay, acting under the watchful eyes of Germany, Spain and Britain, endeavoured to bring about a state of frontier peace by invoking the Sultan's co-operation. Local officials, however, realised that the only fruitful path lay in virtual assumption of authority in Morocco and in the establishment of control over that country from within. This path was denied to them until the early years of the present century brought with them that re-grouping of the European Powers which was the shadow cast before the coming of the Great War.

In 1904, with the coming of the "Entente Cordiale," Britain recognised the right of France to "assist" the Sultan of Morocco in carrying out reforms. Italy's attention was diverted to Tripoli; and Spain, after some excitement, proved quiescent. Germany,

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truculent but outvoted, alone seriously disturbed the tranquillity of the Algeiras Conference, which gave France a recognised, though limited position in Morocco.

The latter State, however, remained a thorn in the flesh of the French position in Algeria and continued outrages in the neighbourhood of the mutual frontier, followed by a massacre of some French employees at the Casablanca Harbour works, compelled forcible intervention in Moroccan affairs. Eastern Morocco and the Casablanca region were occupied.

The last international challenge to the French position in North Africa came in the Agadir incident of 1911, as a result of which, and in consideration of concessions elsewhere, Germany finally recognised the political primacy of France in Morocco. In 1912 the Sultan accepted the inevitable establishment of a French Protectorate over his domains, together with the installation of a Resident-General who was to exercise the powers of the Republic in Morocco.

Disorders throughout the interior of the country followed this imposition of foreign control on the nominal rules of the country. The French promptly suppressed the disorders and extracted his abdication from the Sultan, whose brother, selected by the French for his malleability of character, then succeeded him.

In view of their internationally recognised position in Morocco as the administrators of a protectorate, and not as the sovereign power itself, it was essential for the French that there should be a Sultan as a figurehead of their administration. In Mulai Yusef, the new occupant of the throne, the French had found the ideal man for their purpose—a man whose devout habits disarmed the more prejudiced critics of the new regime and whose retiring and gentle disposition rendered him readily amenable to French influence.

One of the earliest steps taken by the new Moroccan administration was to raise local troops, paid for from local revenues—but under French control—to release French troops and finances from the burden of maintaining control in Eastern Morocco.

The French now found themselves holding two areas of Morocco, between which lay a belt of country not yet under their control and with the savage inhabitants of the mountains and oases of the interior still fanatically opposed to the Sultan, whose power they had always challenged and whose authority which now implied the authority of foreigners, they were determined to resist. These mountain tribes differ in

race from the inhabitants of the lowlands and of the coastal regions. They belong to a more virile, independent stock—well-armed and bred from childhood in the faith that “they may take who have the power, and they may keep who can.”

The French were then faced with the problem of extending their control in an immense region largely mountainous, and entirely destitute of communications, over a well-armed and hostile tribal population.

Their handling of this problem is dealt with in a later portion of this paper.

It is impossible to read even the foregoing outline of the history of the French in Northern Africa without remarking the similarity between their position and their problems and those which have confronted our own people during the rise of British power in India.

In each case, we have the arrival of the traders of a civilised Western Power, in a less civilised country nominally controlled by effete administrators, followed by the commencement of military measures for the protection of those traders. Subsequently we see the collapse of the corrupt and effete local administrations and the assumption of authority in limited areas willy nilly by the Western Power.

Following this establishment of internal security, we find a gradual extension of the area under control, always, though perhaps sometimes unconsciously, in the search for a stable frontier. In each case we see the effort to establish this frontier by the creation of buffer-states, frustrated by the difficulties which arise when a modern state lies cheek by jowl with a less developed type of civilisation. For, as Maurois truly says,* “It is not easy to induce two civilisations to live as neighbours in space, when in time they are separated by centuries.”

Finally, in both cases, we see the Western Power, after the gradual annexation of territory in which the construction of communications presented no great difficulty, confronted by an obstacle consisting of mountainous country, inhabited by martial peoples, well-armed, independent, and intending to remain so; raiders of the plains; into whose mountain fastnesses the driving of roads and railways must necessarily be a slow and expensive process.

With such obvious similarities in our minds, and with the knowledge that, whereas the French appreciated, accepted, and have completed

* “*Marshal Lyautey*,” by Andre Maurois., Chapter VII.

their Moroccan task, we still are faced with our eternal Frontier problem, the obvious question must come into our minds, "Is there then some hidden but dominant difference between our own problems and that of the French, which has held us almost standing still, while they have brought their labours to fruition."

Why is it that a Frontier expert like Sir Evelyn Howell says*, "I feel so tired when people come and tell me about the fine things the French have done in Morocco—with, of course, the implied criticism: 'Why the devil can we not go and do likewise on the North West Frontier?'"

PART II.

THE OUTSTANDING DIFFERENCE BETWEEN THE FRENCH PROBLEM AND OUR OWN.

In thus apparently championing our own Frontier organisation, which seems so sadly barren of results in comparison with those which have occurred from French policy and methods, the late Secretary in the Foreign and Political Department takes his stand on international rather than on internal factors.

It is to be remembered that, although France had to face the most serious international jealousy and suspicion when establishing herself in Morocco, yet, once established there, her extension of control even if pressed to the remotest confines of the country, could only come against the desert. Even in that desert no other power challenges or challenged the supremacy of her interests. The Great War disposed of Germany, the only country which had shown a disposition seriously to question her actions, and diverted the attention of the whole of Europe during several critical years.

Are there, then, international factors which tie our own hands in Frontier matters? The desirability that Afghanistan should continue strong, united and independent, needs no emphasis and the reactions of this desideratum on our Frontier policy are not hard to understand.

The Durand Line is not a true frontier ethnographically. In many places tribes are found who live partly on one side of it and partly on the other, as, for example the Mohmands and the Utmanzai and Ahmedzai Wazirs. Other tribes, such as the migratory Ghilzais, whose territory lies on the Afghan side of the Frontier, move annually to

* Journal of the Royal Central Asian Society, April 1934.

their traditional grazing grounds within the British sphere, or pass annually through the tribal belt into British India in pursuit of trade.

All tribal territory on our side of the Durand Line was once a portion of Afghanistan and the tribesmen undoubtedly still look to Kabul, rather than to Peshawar or Delhi, as the fountainhead of such culture as they may possess. Related as they are by religion, blood and history to their cousins across the Frontier, the interest of our tribesmen in Afghan affairs remains intense.

It is to be remembered that it was our own Wazirs and Mahsuds whose intervention placed the late King Nadir Shah upon the throne, and in view of their armament and of their warlike characteristics, the British tribes, as long as they are able to intervene, must remain a factor of great importance in Afghan internal affairs. In the same way they could still provide a considerable problem for ourselves were they roused against us by an unfriendly Afghanistan.

The tribes, intensely jealous of what they term their "independence," are unable to believe that any step we take to bring them under more efficient control is not taken with the acquiescence of the Kabul Government. The latter cannot afford to alienate, too roughly, so powerful a source of potential help in trouble.

Hence the danger that energetic action by ourselves, in tribal country which is on our own side of the Frontier, and admittedly outside the official sphere of Afghan influence, may result in just that deterioration in stability within Afghanistan which would negative our broader interests.

Though, therefore, it may be true to say that, "The tribes without Afghanistan and Russia beyond them would be no problem at all,*" it is felt that the Afghan factor should not be allowed to weigh too heavily. For if the Afghan Government is genuinely friendly, and if we are able to impose permanent control over our tribes it would obviously be to the ultimate advantage of both Kabul and of ourselves that we should do so, and thus place these king-makers under permanent restraint.

These are matters of high policy.

They are, however, germane to the subject of this paper, because it cannot be hoped that any system of defence and control will operate

* *Journal of the Royal Central Asian Society*, April 1934. (Paper by Sir Evelyn Howell, K.C.I.E., C.S.I.)

efficiently, unless it is actuated by a sound and definite policy, and no progress can be expected unless the intention to progress exists.

PART III.

FRENCH METHODS OF CONTROL AND ADMINISTRATION IN MOROCCO AND THE PROGRESS OF FRENCH EFFORT

From the date of his arrival in Algeria in 1903, as Commander of the Ain Sefra district on the Moroccan frontier, until his final retirement from Morocco at the end of 1925, it is hardly an exaggeration to say that the history of the progress of French effort, in Northern Africa is the history of Marshal Lyautey.*

This great soldier-administrator learned his profession under Galliéni in French Indo-China and in Madagascar. So, before examining Lyautey's work in Algeria and Morocco, it is relevant to remark on one or two of the principles which were taught in the school in which he learned his trade. M. de Lanessan, who was the French Governor in Indo-China at the time of Lyautey's arrival there, based his policy on the principle that a subordinate people should be administered by means of a system which preserved any existing indigenous framework of control.

Galliéni was a soldier who was not satisfied by military action alone as a means of exercising control over a subject and backward people. With military action as the force by which the bounds of control were made to expand, for him there must be a simultaneous expansion of the whole organisation of civilisation—roads, telegraphs, agricultural development, markets, housing. Instead of penetrating an unsubdued area by what might be called a linear column, he moved by co-ordinated and converging detachments. In the selected area thus "bitten off" by the troops, the whole mechanism of civilisation was immediately set to work and when the occupied area had thus been consolidated, local rulers were once again installed, to administer for the future under French direction, and, be it noted, to act as revenue officials for the supreme power.

Seven years under the inspiration of such men as Lanessan and Galliéni, left a mark upon Lyautey's character and ideals never to be eradicated. Soon after leaving Madagascar, at what proved to be

* References to Marshal Lyautey and his policy are based on the biography by A. Maurois.

the end of his pupilship, Lyautey published an article in which his conclusions were placed on record:—

“Military occupation,” he wrote, “consists not so much of military operations, as of an organisation on the march.....military command and territorial command ought to be joined in the same hands.” It is said that he also underlined, in a book on Alexander the Great, a passage which reads,—“He left the vanquished races not only their manners, but also their civil law, and often even the kings and governors whom he had found.” It was on these principles that Lyautey’s policy was based when, a year after his return to France from Madagascar, he was appointed to Ain Sefra.

Things were very difficult at this time for the French on the Western Frontier of Algeria, where their every action was jealously observed by other European Powers. Not yet had the Algeciras Conference and improved relations with Great Britain, brought them any liberty to intervene in Moroccan affairs. Their frontier was the scene of most serious raids and outrages, in respect of which the region of Ain Sefra held the blackest record.

On his arrival, Lyautey found a situation in which a progressive frontier policy appeared impossible for fear of international complications. Arising partly out of this, he found a rigid, unimaginative defensive military plan, in which little, if anything, was left to the initiative of the local commanders. Above all, he found political control, military command, and intelligence duties, under the control of three separate and mutually independent officials.

This situation was anathema to him and he left at once to place his views and his demands before the Governor-General, M. Jonnart. Within a few weeks Lyautey had had his way and supreme control, political and military, within his own area, was vested in himself.

He discovered almost at once, that the local inhabitants were quite unaware of the exact locality of the theoretical frontier which had been agreed upon between the Powers. His measures for the improvement of the economic status of the natives with whom he was in touch, soon led to a request to be taken under French protection from a neighbouring tribal section who, in actual fact, were domiciled inside Moroccan territory. Their request for protection was granted and for this purpose a French force was located at Ras-el-Ain, Berguent, which was actually in Morocco.

The consequence of this action was a storm, raised even thus early by opponents of the Lyautey policy, which nearly resulted in his disappearance from the scene. With the loyal support, however, of the Governor-General the storm was weathered, and international criticisms were disarmed by an agreement with the Sultan, to the effect that Ras-el-Ain should be protected by a joint Moroccan and French Force.

The interest of this incident, beyond the fact that it was the first French step into Morocco, arises from the manner in which it displays for us in action the first stages of the Lyautey method. First of all political contact and the establishment of confidence in the minds of a tribal section. Then military control and the assumption of responsibility for security. Thirdly, steps to improve local economic conditions.

Safely past this somewhat trying opening of his tenure, the new commander of the Ain Sefra area was free to take up the general reorganisation of the military dispositions in his command.

He abolished the line of small frontier posts in which he found that his troops had been dissipated to such an extent that no detachment was strong enough to do more, at the best, than hold its own. In place of these he established strong concentrations at nodal points—concentrations which could provide, not merely local security, but strong and mobile columns in addition. He studied the equipment of the men and introduced many practical modifications in it, suitable for local conditions as, for example, the provision of rope sandals for his native troops instead of boots, and the abolition of their packs.

All the time, however, tied as he was by international considerations to the defence of an impossible frontier, he did not cease to believe and to preach that other methods should be initiated. He was definite that no improvement could be expected from diplomatic pressure on the Sultan. Neither did he desire the military conquest of Morocco. What he advocated was a steady, systematic absorption of the lawless areas in front of him, by methods of peaceful penetration—by the setting in motion of what he termed “an organisation on the march.”

So the years passed by until, at the conclusion of the Algeciras Conference in 1906, Lyautey was promoted to the military and political control of the whole Algerian-Moroccan frontier. Even so, it was not until 1907 when, on account of the murder of a Frenchman at Marrakesh, the orders came to step forward and occupy the Moroccan town of Oudjda.

This called for an operation against a warlike tribe who inhabited a mountainous and wooded tract between Oran and the objective, and who caused considerable trouble to the French by their raids on the latter's lines of communication. The centre of the tribal resistance was first isolated or "bitten off." Then, with detachments closing possible ways of retreat, four columns drove their simultaneous way by different routes into the tribal stronghold and, in less than a fortnight, resistance was at an end.

It was inevitable that this occupation of Moroccan territory should give rise, once more, to a delicate international situation. Lyautey's proposal to deal with this was, on the surface, almost Gilbertian—but it was accepted, and it worked. It was no less than that the districts on both sides of, and immediately adjacent to, the frontier, should be under a joint High Commission representing both the Sultan of Morocco and the French Government in Algeria. This was agreed to and Lyautey himself was appointed as the Moroccan as well as the French Commissioner! Thus the area in which he held sway was again extended and his policy of unified control and "an organisation on the march" received an added impetus.

The results of this unification of control and policy, on both sides of the frontier, soon led to the possibility of further economy in the number of troops required; in a further reduction in the number of military posts; and in the handing over of normal patrolling in the border districts to a force of frontier irregulars the basis of whose organisation was that security must depend upon mobility. They also led to the abandonment by the tribes of their nomadic and predatory habits and to a welcome rise in locally collected revenue.

During the years 1910 and 1911 Lyautey, having completed the tenure of his overseas appointments, was serving once more in France. These years saw the final challenge to the French position in Northern Africa in the shape of the Agadir incident, as the outcome of which France's liberty of action in Morocco was internationally recognised.

In the spring of 1912 the Sultan, Mulai Hafid, accepted the French protectorate and the installation of a Resident-General at his capital. To this latter post, M. Regnault, previously French Minister at Tangier, was appointed.

No sooner, however, was the establishment of the protectorate generally known, than serious outbreaks in which many Frenchmen lost their lives, commenced.

At once there was a conflict of opinion between the newly appointed Resident-General and the French Military Command, as to the measures which should be adopted to re-establish public security. It was obvious that under unified control alone could the situation be restored. The French President would have preferred, in accordance with the Republican traditions, to have a political official in supreme control, but other counsels prevailed and it was agreed that it would be premature, in such conditions, to place a civilian at the head of affairs.

The choice fell on General Lyautey.

The way was now open for the application, in a still wider sphere, of those methods which had proved so successful on the Algerian frontier and in Eastern Morocco.

On his arrival at Fez, however, after a somewhat exciting journey through a wide area of disturbance, Lyautey found a difficult situation prevailing. The town was virtually in a state of siege and danger was threatening, not only from the tribesmen who almost surrounded it, but also from the disaffected element in the town itself. The French Political and Military Headquarters were not in accord. The Military Commanders, having had no special call to study political and tribal problems, which were outside their sphere of responsibility, were treating the respectable and law-abiding classes as part and parcel of the inhabitants of the town and all as dissidents. These were the very people whose sympathy and assistance it was the principle of the new Resident-General's policy to enlist on the side of the administration.

It was also Lyautey's desire, in keeping with his principle of preserving the existing framework, to work through and in the name of the Sultan.

The latter, however, was in alternating moods of fear and sullenness, talking of abdicating one day and deciding to remain the next.

A military defeat of the tribesmen provided the necessary breathing space in which to call the leading townspeople and religious leaders together; to re-establish their self-respect; and to reinstate them in their traditional offices of control. It also enabled the Sultan to make up his mind that he would be better off living quietly on a pension in retirement.

He accordingly abdicated in favour of his brother Mulai Yusef, who, as has previously been said, proved the ideal figurehead for the furtherance of Lyautey's policy. For the moment then, the situation was saved, but, throughout the country generally, a state of anarchy

prevailed and the Berber tribes of the mountains of the interior, in particular, refused to acknowledge either the new Sultan, or his infidel lieutenants.

Yet only two years later, when the Great War broke out, it was possible not only to send the greater part of the forces in Morocco to France, but to do so without arresting the progress of the country. If this was the measure of the success of the French policy, it was no less the measure also of the remarkable man whose efforts brought it about.

Disinterested and self-sacrificing to a degree; hardworking and painstaking beyond belief; imaginative and sympathetic; Lyautey may well be taken as an example of the ideal type of soldier-administrator. At the same time, a study of his career produces one more great lesson which our own people might do well to learn,—he never gave the impression that he was in a conquered country.

Although in 1912 much remained to be accomplished, we can now deal fairly briefly with the progress of events.

His new and wider viewpoint enabled Lyautey to realise that the Berber inhabitants of the mountains were of an entirely different race to the Arab tribes who form the bulk of the inhabitants of the lowlands and the coastal plain. A decree was therefore published exempting them from the normal administrative system which prevails in the remainder of the country. The latter follows the general customs of Mahomedan law, but the Berbers were allowed to retain a tribal form of government in which their councils of elders exercised traditional authority.

This step and its effects have recently been severely attacked* as machiavellian to a degree and as being in cynical pursuance of a policy of dividing the inhabitants of the country against themselves, and of selling, when necessary in the interests of the controlling power, one section against the other.

In the light of what has already been said, however, it is considered fairer to accept the view that the decree was merely a logical step in the policy of preserving local customs and the existing indigenous framework of government.

* "The Franco-Muslim Position" by M. Pym in the *Journal of the Royal Central Asian Society*, October, 1934.

Large areas of the country still remained in a state either of open rebellion against, or of passive non-recognition of, the central government and before even the Lyautey policy could be brought to bear on these, it was essential to construct communications. Without efficient roads and a certain number of light railways, it was impossible to maintain forces in the field of the size which might be required. In this connection it is to be recorded that, whenever possible, the French avoided bloodshed. They endeavoured, when peaceful penetration failed, to impose their will by a threat rather than a blow, by the display of overwhelming forces.

The alternative policy, of ruthlessly repressing all intransigent elements, might certainly have brought about the subjugation of the country as a whole more quickly. It could not, however, but have left behind a legacy of enmity and hatred—and in view of the period of strain which the war years were so soon to impose, it was well for the French that they chose the less irritating method.

Until 1914 then, all efforts were devoted to the extension of communications. The progress of these latter was followed at each stage by fresh political contacts with tribes encountered along the selected routes. Only occasionally were military actions called for and by the middle of May 1914, the French in Eastern Morocco had joined hands with their comrades based on Fez.

When the Great War broke out the French were faced with two alternative courses of action in Morocco. The greater proportion of the troops, both white and coloured, were required in France. Should they abandon all their posts in the interior and withdraw to the coast, or should they adopt the "policy of the smile" and hold their ground!

The first instructions which Lyautey received were to withdraw to the coast, but seeing that such a course must inevitably bring ruin in its train, he protested against it and eventually won his point. Every expedient was used, to fill the gaps which the departure of echelon after echelon of officers and troops for France left in the Moroccan organisation.

A great deal of ingenuity was displayed in diverting the local imagination from the issues of the war to safer subjects closer at hand by the inauguration of town-planning and other projects in the nature of civil works. The risk was great, but it had been correctly appreciated by the Resident-General that, in dealing with untutored peoples,

no risk is so great as that of seeming vacillation or withdrawal. The policy succeeded and, in spite of anxious moments, Morocco remained tranquil—tranquil enough indeed to allow of Lyautey's own absence for a period in France.

In the immediately post-war years the Resident-General, in addition to pushing forward the extension of communications, was chiefly engaged in resisting proposals to introduce into Morocco a form of administration exactly resembling that of France, and in bringing about a greater unification of policy throughout the whole of the Northern African dominions of the Republic. In both these directions he met with well-deserved success and all seemed favourable for the early completion of the work of pacification and consolidation.

That this consummation was delayed, and indeed has only recently been reached, was due to factors outside Lyautey's control. The rising in the Riff owed its success and its duration to the inadequacy of the Spanish effort in their share of the maintenance of control in the area of mutual Franco-Spanish interest. Even so, the Moroccan structure held and, at his retirement in October 1925, Lyautey was able to hand over a once more peaceful country to his successor.

Since then there has been no slackening in the French effort and no vacillation in their policy. Taught by their experiences the advances have, perhaps, shown greater caution. Greater emphasis than ever has been laid on the necessity for the complete consolidation of each successive area before the advance was resumed. With this there has been displayed great mental flexibility in the employment, suitably to the local problem, of all modern developments in war material.

But the old and well tried principles are seen underlying each step which has been taken, until, now, the only remaining discordant elements are a few elusive refugees far away in the remoteness of the ante-Atlas.

Before passing to the consideration of our own problem on the North West Frontier, it is convenient to summarise what those principles appear to have been.

(a) *Policy.*

A deliberate but unwavering policy of bringing the whole country under control is considered to have been the mainspring of the French success.

(b) *Command and Control.*

In incompletely subjugated areas both military command in its widest sense, and political control, are seen to have been unified.

(c) *Contact.*

Political contact and the establishment of confidence in the tribal mind were the first steps towards the establishment of control.

(d) *Absorption.*

Successive tribal areas were absorbed into a system rather than penetrated by columns.

The absorption of each area was accompanied by a military advance which ensured both submission and subsequent protection.

(e) *Consolidation.*

Each area absorbed was consolidated by the extension of communications, before the next step forward was taken.

In the process of consolidation existing institutions and forms of government were preserved and local rulers retained, whenever possible, as representatives of the Central government.

Economic and humanitarian benefits were conferred on each area in turn. Concurrently with these a certain degree of disarmament was carried out and the local inhabitants who were allowed to retain arms were organised to augment or to release portions of the French forces. The collection of revenue was also introduced.

(f) *Status of Inhabitants.*

The French treated the inhabitants more as new fellow-subjects of the Republic, than as conquered and subject races.

In addition to the foregoing the following principles are observed which apply particularly to the employment of military forces :—

(g) Whenever possible hostilities were averted by the display of overwhelming force.

(h) Dissipation of strength in small detachments was avoided and strong concentrations at nodal points were the rule rather than the exception.

These concentrations were each capable of providing powerful and really mobile columns, suitably equipped.

(j) When military penetration had to be resorted to, it was carried out by converging columns working in mutual strategical co-operation, rather than by penetration by a single route.

(k) When disorders occurred or set-backs were experienced, there were no withdrawals and no indications of vacillation in determination to carry the policy into effect.

Let us now turn to the North West Frontier of India and examine our own methods in the light of the principles which guided the French in their Moroccan effort.

PART IV.

OUR OWN ORGANISATION AND METHODS OF CONTROL ON THE NORTH WEST FRONTIER.

(a) *Policy.*

It has been said that no Frontier organisation can be expected to operate efficiently unless it is inspired by a sound and definite policy. Let us for a moment consider certain phases of policy which have assisted in bringing about our present situation on the Frontier.

A despatch from the Secretary of State for India, written in 1898, laid down the following broad principles :—

- (a) The concentration of our regular forces in the manner best calculated to enable government to discharge its responsibilities, and
- (b) The avoidance of any extension of administrative control over the so-called independent tribes.

These principles were presumably the basis of Lord Curzon's "stand still" policy.

This great imperialist, in the face of a considerable weight of military opinion, withdrew the regular troops to stations within the administrative border. He laid down that in tribal country we should hold advanced posts only, garrisoned by tribal levies, and that we should rely "more on force of character in our political officers than on weight of cannon,"* to effect control. He personally decided the details of future military dispositions during a hurried Frontier tour and forbade the improvement of trans-border communications.

Such a policy and such methods could only mean the abandonment of initiative and the adoption of a permanently defensive attitude, punctuated by expeditions of reprisal at intervals when the accumulated tale of tribal incursions into the settled districts roused the authorities to action.

* "Life of Lord Curzon" by Lord Ronaldshay, Vol. II, Chap. 3.

Lord Curzon's arrival on the scene was too late to influence the situation in Baluchistan, where permanent military occupation commenced and a political officer was installed at Quetta as early as 1877, and at Fort Sandeman two years later.

On the remainder of the Frontier, however, the elimination of the results of Lord Curzon's poor legacy has been a slow, painful and expensive process, not yet completed. Official pronouncements on Frontier policy have, in recent years, been conspicuous by their absence and only when action has been forced upon us have we taken steps which show that, although the "Close Border" policy may still possess adherents, it does not hold the field to-day.

The resultant situation is that, on different portions of the Frontier, our policy appears to vary and it is difficult to discern any clear and comprehensive plan for systematic progress.

In this respect, our and the French attitudes, towards our respective problems, are definitely at variance and it is considered that we have something to learn from Morocco. Perhaps, indeed, it is this vagueness in policy which led Lord Ronaldshay to describe the Frontier as "sooner or later the despair of all who attempt to solve the perennial problem which it presents." *

(b) *Command and Control.*

Taking the most optimistic view, it can only be argued that our imposition of control is complete in Baluchistan and the Zhob. On the French model, therefore, we should expect to find political authority, with regard to the unsubjected tribal areas from Chitral to the Gomal River, in the hands of the local military commanders.

Far from this being the case, we find a system in which the subdivision of control has been carried to a fine art. For the purposes of this paper it will be necessary briefly to examine our present organisation under the following four headings:—

(i) *Political.*

The Governor of the North-West Frontier Province is also the Agent to the Governor-General in our relations with the tribes which live between the Administrative Border and the Afghan Frontier. He is therefore burdened, not only with the administration of a province, but also with the constant cares and anxieties which are

* "Life of Lord Curzon," Vol. II, Chap. 2.

inseparable from the presence of at least a quarter of a million armed tribesmen immediately across the Border of that province.

The Province itself comprises the five districts of Hazara, Peshawar, Kohat, Bannu and Dera Ismail Khan, each under its Deputy Commissioner.

Trans-Border affairs generally are dealt with through five Political Agents—Malakand; Khyber; Kurram; North and South Waziristan. In the case of Waziristan an intermediate authority appears in the person of a Resident.

This is apparently a not illogical system of decentralisation of political control by areas. Unfortunately, however, matters are complicated by the peculiarities of the Administrative Border itself, beyond which, it is to be remembered, the despatch of 1898 forbade the extension of administrative control. The Border is hardly at any place ethnographical. It cuts through tribe after tribe throughout its course. There are consequently tribes which live partly in administered and partly in unadministered territory.

Efforts have been made to remedy the resultant situation by placing our relations with some of the tribes, thus situated, in the charge of the appropriate Deputy Commissioner. In other cases, of which Peshawar may be quoted as an example, where no conveniently placed Political Agent exists, the Deputy Commissioner conducts affairs for trans-Border.

The Deputy Commissioners at any rate appear, in some respects, to exercise two functions—those of their office proper, and those of a political agent. The tribes affected have to look for guidance to an official whose primary concern must, and should be, the internal problems of the district in which he represents the local government. This state of affairs can be satisfactory to neither party.

(ii) *Civil Armed Forces.*

The Political authorities have under their direct control the Frontier Constabulary in the Administered Districts as well as the trans-Border irregular corps of Scouts and Militia.

The Frontier Constabulary are a provincial force whose principal role is the prevention of raiding from trans-Border territory. They are armed with modern rifles and are commanded by selected officers of the Indian Police under the Commandant of the Frontier Con-

stabulary. The latter has his headquarters with the N.-W. F. P. Government. The strength and location of detachments of the Frontier Constabulary are decided by the N.-W. F. P. Government and this force can only, strictly speaking, be employed inside the Administrative Border.

They are normally at the disposal of the local Deputy Commissioner.

It is obvious that, as and when control of any trans-Border area, from within, becomes effective, the liability of raids in the adjoining area of administered territory proportionately decreases. The fact that the Frontier Constabulary are controlled through a separate chain of authority from that which operates the trans-Border forces, cannot but impede the reductions and economies which should result from trans-Border progress.

The Scouts and Militia are raised primarily for service in the areas which give the several corps their respective names. The tendency in recent years, however, has been to use local reserves as a pool, for use anywhere along the Frontier in time of need.

They are commanded by seconded officers of the Indian Army and are mutually independent, although a certain degree of co-ordination is effected by the Inspecting Officer of Frontier Corps, who has his headquarters with the Agent to the Governor-General.

The general role of the trans-Border Corps is the maintenance of the authority of the local political agent, at whose disposal they are, and the creation of a certain degree of security by constant patrolling.

Their detachments, the strength of which is decided by the political authorities, are guaranteed timely support in time of need by the army.

In addition to those types of civil armed forces which have now been briefly described, there are, in trans-Border areas, many thousands of local levies and tribal armed police, or Khassadars, all under the local political official.

(iii) *Royal Air Force.*

The formations and units of the Royal Air Force, which are spread along the Frontier, are in no way under the command or control of the local military commanders.

Command of the two services is united only in the person of H. E. the Commander-in-Chief in India.

The R. A. F. and the Army co-operate during certain phases of training, but the local military commander cannot order an air reconnaissance unless and until a specific air unit has been placed at his disposal for a particular operation.

The Political authorities, on the other hand, have a direct call on the R. A. F. for air reconnaissances and even demonstrations.

Air bombing is only allowed by the sanction of the Government of India after control of an operation has been delegated to an appropriate military or R. A. F. commander by the C.-in-C.

Command of the R. A. F. on the Frontier, to the north of the Gomal River, is centralised in the headquarters of No. 1 Indian Group, at Peshawar.

(iv) Army.

The army organisation consists of the three military Covering Troops Districts,—Peshawar, Kohat and Waziristan,—which are, in turn, under the G. O. C.-in-Chief, Northern Command, with Headquarters at Rawalpindi and Murree.

Within Districts, the troops are organised into minimum garrisons and maximum mobile columns.

The District Commanders ensure the essential support for the civil armed forces in time of need, but cannot control the strength of the latter's detachments in normal times. They are, of course, in no way responsible for the conduct of tribal relations in the district which they command, and often only come to know of the tendency of events informally, and by personal liaison with their political "opposite numbers."

In war, command of the local civil armed forces passes to the District Commander concerned, as also does the eventual responsibility for the maintenance of those forces.

The tactical security of R. A. F. ground stations is, of course, another army responsibility.

Enough has been said to indicate the number of authorities and officials, all of whom, to a greater or less extent, share in that exercise of control which the French in Morocco found good to centralise in one individual. It is for serious consideration whether our present system on the Frontier can possibly be the most economical in men or money, or the most rapid and efficient in action.

(c) *Contact, Absorption and Consolidation.*

When we search the North-West Frontier for something which compares with the French system of political contact with a tribe, followed by the absorption of the tribal territory in question into the area of control and the subsequent consolidation of that territory by the extension of communications and the redistribution of armed forces, we cannot but be somewhat at a loss.

On the other hand, our desire to preserve the existing framework of control is obvious from the continued existence of such States as Chitral, Dir and Swat in the north, and Kalat in the south, to say nothing of our support of local petty chieftains and tribal leaders in the more democratic centre, and our recognition of the importance of the tribal *jirgah* or assembly.

Let us, for a moment, look for the system of contact, absorption and consolidation in the two tribal areas which have been penetrated most recently—Waziristan and the Lower Mohmand country in the Gandab Valley.

Political contact with the tribes certainly came first, but was directed rather to obtaining security on the main routes through tribal territory than to leading the tribes to accept our control. Yet instances in which tribes have petitioned to be "taken over" are not hard to find, though such petitions have seldom had a favourable reply.

Failure to take over successive tribes, when opportunity has offered, has deprived us of ability to improve local, economic and general conditions. We have preferred to pay "allowances" for somewhat intangible benefits and have eventually been driven to penetration by the prevalence of local disorder or instability.

In the case of Waziristan we have advanced our line of military posts and have developed communications to such an extent that we are now in a position to exercise military control over the greater portion of the inhabitants.

We have not, however, imposed any degree of disarmament, nor have we introduced the collection of revenue.

Political control increases but slowly in face of our failure to insist upon a measure of disarmament, and little has been done, either to improve economic conditions, or to introduce the benefits of civilization.

No reductions in our garrisons, and in the expense which they represent, can be anticipated while the tribes remain armed to the teeth.

In the case of the Lower Mohmands, we had guaranteed the security of the tribe for many years against aggression by their neighbours, but nothing has been done to provide the communications which were essential to make our guarantee effective.

When the test came, the exertions of the troops overcame to a great extent the difficulties of a roadless line of advance and a road was rapidly constructed when the Army temporarily assumed entire control.

Since then, however, we have again withdrawn. We penetrated, but we neither absorbed nor consolidated and the situation in the Gandab Valley is as it was, except for the road, which remains as a memorial of the brief interlude of unified control.

One more case may be quoted as an illustration of our illogical methods. Our main lateral trans-Indus road, which connects the important civil and military stations of Peshawar and Kohat, runs for some miles through a salient of tribal territory. Even here no progress has been made and we still depend, for the security of the route, on tribal favour, for which, needless to say, we pay accordingly.

It is obvious, therefore, that our present system still refrains from penetration of tribal territory except when action is forced upon us. Even when penetration occurs, one looks in vain for those measures of absorption and consolidation which must follow if economy and efficient control are to result.

PART V.

SUGGESTIONS FOR AN IMPROVED SYSTEM OF DEFENCE AND CONTROL ON THE NORTH-WEST FRONTIER.

Concurrently with the introduction of certain modifications in our present organisation, it cannot be too strongly urged that a fresh declaration of policy should be made with regard to the tribal belt. In advocating such a declaration it is realised that the terms of existing agreements or treaties, with certain tribes, would need to be revised.

The circumstances in which these agreements were made have, in many cases, changed and it should not be beyond the ability of our political authorities to gain tribal acquiescence in a new policy more appropriate in modern conditions and one which could only result in benefits to all concerned.

It is suggested, therefore, that our policy should be defined as the establishment of effective control over all tribes which live on our side of the Afghan Frontier.

The following measures would, it is considered, enable us to implement this policy in the most efficient and, in the long run, in the most economical manner.

(a) *Control.*

It is considered that unified control is essential in any efficient system for dealing with tribal territory.

In areas where our position has been consolidated and is unquestioned, control should be centralised in a political official, while, in areas as yet unsubjugated, the military commander should be the supreme authority.

This would indicate that in Baluchistan, and perhaps the Zhob, the Agent to the Governor-General might be a civilian, while his counterpart in regard to tribal territory adjoining the North-West Frontier Province should be a soldier.

The Governor of the North-West Frontier Province should be accordingly relieved of his secondary role as Agent to the Governor-General.

Consideration of the possibility of uniting the whole trans-Border tract, from Chitral to the Persian Frontier, under one authority, produces the conclusion that the distances involved are too great. The present division between the areas of the two Agents to the Governor-General appears convenient and should remain.

Quetta appears a suitable headquarters for Baluchistan and the existing military organisation of the Western Command would present no difficulties in the suggested scheme.

In the Northern Command, however, there are the positions of the three Covering Troops Districts and of the Headquarters of the Northern Command to be considered.

Located at Rawalpindi and Murree the latter is not well placed for liaison with the Governor of the North-West Frontier Province, with whom the new authority for tribal territory would need to maintain the closest touch ; neither is it conveniently situated in regard to the Royal Air Force Group, which has its headquarters in Peshawar.

It is therefore suggested that the military Districts of Peshawar, Kohat and Waziristan should be separated from the present Northern Command and should be formed into a Frontier Command with headquarters at Peshawar. On grounds of convenience and of economy this step would call for further measures of reorganisation in the military system elsewhere, but these are outside the scope of the present paper.

The G. O. C.-in-Chief of the Frontier Command should be Agent to the Governor-General in the trans-Border tracts from Chitral to the Gomal River, and the Commanders of Peshawar, Kohat and Waziristan Districts should be his local representatives. At each headquarters one or more officials, specialists in tribal affairs, should be appointed in charge of civil administrative questions affecting the tribes.

(b) Armed Forces.

Khassadars, local levies, or other forms of tribal police, should be regarded as non-military personnel and should be controlled through the officials mentioned above.

All other armed bodies, which exist for the security of the Frontier, whether Frontier Constabulary, Scouts or Militia should be military bodies. This would ensure economy in numbers, equipment and fluidity in employment with the avoidance of clashes of mutual interest in such matters as recruiting.

At the same time there would be no question of transforming the irregulars into regulars, for the special characteristics which confer their particular value on these irregular corps should be scrupulously preserved.

At the same time, it would appear desirable to take steps to render the irregular corps available for service on the Frontier as a whole and to provide them with a serviceable reserve.

A definite, even though perhaps small, allotment of R. A. F. should also be placed under the Frontier Command for local

operations. This arrangement need in no way interfere with the normal R. A. F. channels of inspection and administration, nor with the maintenance, under central control, of the main air striking force.

The Army units in the Frontier Command should be normal units moving in relief and identical in organisation with units in other Commands. There are certain modifications in equipment, however, which might well be adopted for use in Frontier Districts only.

(c) *An Organisation on the march.*

Remodelled on the lines which have been outlined above, our organisation would be ready to advance.

A carefully thought-out system of communications, which the process of implementing the higher policy would necessitate, should first be decided upon.

A programme should then be framed which would lay down successive steps to be taken during, say, the next ten years. This programme would not be in any way spectacular, as it would be drawn up to fit the financial resources likely to be available. It would, however, be definitely progressive.

In this programme, besides the stages by which communications were to be constructed, we should find :—

- (a) Description of successive tribal areas to be absorbed.
- (b) Measure of disarmament to be imposed in each area in turn, also in stages.
- (c) Steps for the introduction of revenue collection.
- (d) Steps for the improvement of economic conditions.
- (e) Steps for the amelioration of social conditions.
- (f) Measures proposed for the preservation of indigenous systems of local government in each area subsequent to its absorption.

CONCLUSION.

In the changing conditions which the passage of time brings with it, there arise in every form of human activity occasions when some form of stocktaking must be undertaken. The time is now ripe for a scrutiny of our present somewhat patchwork organisation for the defence and control of the Frontier.

In such changes as may result from this scrutiny, slavish adoption of the methods of the French or of any other nation is not advocated. We have our own special problem to solve and we have our accumulated national experience to draw upon. We have our own methods and our own ideals. At the same time, it would be folly to refuse to learn from the experience of others and there are certain principles which are of universal application.

Of these perhaps the greatest is that while unified control gives efficiency and economy, a diversity of authorities cannot but conduce to extravagance and indecision.

SMOKE.

BY LIEUT.-COL. S. R. WASON, M.C., R.A.

The Great War left as its chief tactical legacy the supremacy on the battlefield of the small arm automatic weapon. It left as one of its material legacies an artillery of which the design, technical methods and tactics could, given almost unlimited ammunition and time for making plans, neutralise those automatic weapons. It left another promising legacy in the shape of the tank. The artillery of that period, however, is out of place in moving warfare and on the frontiers of the Empire. The tank is being pushed into its place in the "mosaic of the battlefield" and this very useful weapon is seen to have its limitations; in India these are further prescribed by finance and by the uses we have for the army in peace. Gradually we are being forced to the conclusion that our possible enemies in the East will have these small arm automatics, and that we, using the methods we have been practising, may be short of material force to overcome them.

The same difficulty, more or less, assailed us in the Great War and the answer generally was more and larger shells—quite impossible now. At the same time, however, among the plethora of weapons that were so often mishandled, smoke shell and smoke tactics appeared and did their share. On the 20th September 1917, the first of the "Passchaendaele" attacks, the Commander of the 9th Division was prepared to attack under a smoke barrage and almost nothing else; but the ammunition was not available. However smoke screens about that time played a considerable part and a diagram of the "Cambrai" attack shows large pre-arranged smoke screens to deny observation to the enemy; this was a new use of smoke. Another common but perhaps rather artificial use of smoke shell was to show the timings or changes of direction of barrages, and the flanks of formations.

Infantry carried smoke grenades for specific operations, and smoke candles also were used. In the meantime those of us who served in the East had many illustrations of the effect, and sometimes of the disadvantages, of the dust raised by high explosive shell. In the technical descriptions of different types of shell in "Artillery Training" their relative screening effect has always been given.

After the war a proportion of smoke shell was introduced into the normal echelons carried by field artillery. No smoke-producing agent has been introduced into the normal equipment of any other arm. Such development in smoke tactics and training as there has been has therefore been confined to artillery. The first considerations have always been the study of conditions and the reduction of ammunition expenditure, and these have led to two normal methods of employment; firstly, as a screen to conceal the attack when the wind was from a flank, and secondly, as a means of covering the flanks when the wind blew towards the enemy. The great value of smoke for concealing tank movements rather led investigations at home into that channel. In any case the object has always been to form a smokescreen co-ordinated with infantry and usually tank movement on a considerable scale; this will not often arise in the type of fighting we envisage, and co-ordinated generally meant pre-arranged and not infrequently arranged the day before. How does this accord with the principle first in the smoke manual—surprise?

Concurrently with this leisurely development of smoke tactics and training, there has been much valuable experiment and enquiry into smoke-producing methods and material and the conditions of their effective employment. In smoke as in other things the War Office has been content to put its money into experiment and then to wait. One reason for the non-development of smoke tactics, as a whole, at home has undoubtedly been reliance on the tank.

So our starting-point in India is much experiment and material unaccompanied by much tactical theory and experience in training. The only actual experience of smoke in India until lately was of post-war smoke artillery shell which gave poor results, and as a result it was said that smoke was "no good in India." Home provides us with few developed methods and those mostly on an elaborate "fire-plan" basis. It may be all right for Western Front conditions but it certainly won't work here. We only know that the "pig can't get over the stile" and smoke may help him. But we want it as a normal weapon and we want it in considerable quantities at short notice. We want to get that surprise we talk about. We want to develop its tactics and get them understood by everyone so that we may make the best of any smoke-producing methods we may introduce.

Before we can discuss the pros and cons of the various methods of smoke-production we must consider the employment of smoke from a tactical point of view and see what we want and what we can get.

We want smoke to help our infantry to get forward under conditions when otherwise much expenditure of force—ammunition, tanks, infantry, or cavalry units—would have to be used, and probably much time too. The ideal would be that over a certain period of time we should fight and move in broad daylight while the enemy would be in the dark. The expression is often used that we should create an artificial mist like that under which the Germans attacked on the 21st March 1918. This is, however, so nearly physically impossible that the idea is impracticable; its nearest resemblance is produced by artillery or tank-laid smoke on a perfectly still day.

Almost the most important factor in smoke tactics is that the enemy's weapons need not be located with nearly the same accuracy as is essential for their neutralisation by other methods. The enormous pull this gives in saving of time is of inestimable value to the attack. It is probably most important in the early stages of contact when the object of the enemy is to delay the advance and so gain time for the organisation of the defence. It is perhaps the factor which will enable us by use of smoke to obtain that element of surprise without which tactical success is so difficult to achieve.

The next tactical factor in the use of smoke is that the means of smoke-production should be readily at the hands of those who need it—the attacking infantry; this is the problem of close co-operation. There is an ever-lasting struggle between the wish to put all means at the disposal of the commander on the spot and the necessity of keeping down his responsibilities in training and in command in the field. The ideal—and quite impossible situation—would be for the commander in the forefront of the battle to have all forces under his thumb, artillery, tanks, R. A. F. In most cases this would give him so much to do that nothing would get done. But if smoke tactics are to do their best for us some smoke-producing weapon must be at his beck and call.

Then in order that the help given may be adequate the means of smoke-production also must be adequate. If the front of an attacking brigade is to be screened for twenty minutes or so, large volumes are required; if it is desired to blind a more or less unlocated machine

gun while a few infantry are moved forward a couple of hundred yards into a nullah, quite a small quantity of smoke may suffice. There was a very senior officer whose common remark at artillery practice camps was "the fire was accurate, but was it timely?" The essence of the smoke tactics we need is that the fire should be "timely."

Next may come the question of control, and probably it should have come first. This principle is always in conflict with that of close co-operation. If every battalion commander is to have the power of whistling up large smoke screens when he wants them control of the use of smoke on a wide front will not be easy. And if every platoon commander has a potential smoke screen in the pockets of his men—who eventually and inevitably get out of even his control—it will be seen that control will be a real problem. In attack some control will be necessary in order that observation of the enemy and often of the progress of our own troops may sometimes be possible. In defence strict control will be essential as the use of smoke, except at well chosen moments, will be almost certain to provide some of the forward elements of the enemy with exactly what they need—cover from view to help them to get forward. Then in the case of some at least of our potential enemies on the frontiers of India there is the difficulty of inducing them to stand to fight at all. If an opportunity is developing to bring such an enemy to an engagement the use of smoke which may create a screen enabling him to melt away unobserved may wreck the plans of the commander.

It has already been said that up to now the idea of the use of smoke has been to form a screen during the attack, and the screen has had to be a good thick one. Two other promising uses of smoke can however be suggested. The first is a partial screen. It takes very little smoke on a still day to produce an atmosphere through which the firing of rifle or a machine-gun with any accuracy is most difficult. The second suggested use is as a means of close support in the looser phases of contact with the enemy. What the infantry require at this stage is defilade, that is, some cover by making use of which they can work their way forward straight or obliquely. If conditions are not too unfavourable artificial defilade can be provided by very little smoke, and accurate knowledge of the enemy's locations is quite unnecessary. There are in fact only two conditions under which smoke absolutely cannot be used, *i.e.*, a very strong wind or a wind blowing more or less directly from the enemy.

We are now ready to look at the methods of smoke-production. But a general consideration must first be remarked, for it largely governs the whole question. The introduction of smoke-producing equipment into each individual unit must first be considered from the point of view of how it will affect its organisation and armament. Smoke-producing weapons inevitably replace man-killing weapons; it is obvious they must only do so to a limited extent. The degree in which the introduction of smoke-producing equipment interferes with the organisation, method of employment and armament of a unit will probably be the deciding factor as to its introduction. This difficulty is enhanced by the fact that smoke is not of the same value in all phases of the offensive and defensive battle; we have already seen that its use will sometimes be prohibited.

The shell from the field or light gun or howitzer must come first as it is the method of which we have most experience. The improved types of these shells is a most important factor.

Its advantages (not necessarily compared with other types of smoke) :—

It can be carried in quantity and can produce smoke on a large scale. It is rarely if ever absolutely ineffective.

It is easily controlled.

Its introduction in India does not materially upset organisation, establishments or training.

Its use even under indifferent conditions saves a great deal of other artillery ammunition. One of the Taxila smoke screens would probably have given useful covering fire to the infantry attack on a front of 800 yards for 20 minutes with 45 shell (officially the conditions were described as "bad"); with normal ammunition 2,500 shell from eight batteries would have been required, and beyond that accurate locations of the enemy's positions would have been necessary.

Its disadvantage; its use demands a certain degree of preparation and pre-arrangement which entails a certain delay. The gunner who can produce a large smoke screen cannot always be at the hand of the infantryman who needs it; the introduction of wireless will improve this.

Next comes the mortar ; its advantages :—

It should be possible to get this screen produced considerably quicker than with artillery, though not, of course, on such a large scale.

Its use is easily controlled.

Its disadvantages ;—

Little ammunition can be carried.

Co-ordination of the action of mortar sections even of adjacent battalions would be difficult.

Its introduction complicates the organisation, training and handling of the battalion, adds to its transport, and alternatively necessitates an increase in establishment or reduces either machine guns or riflemen.

Then the smoke grenade ; its advantages :—

It produces a very good, if local, smoke screen without addition to establishments, increases in transport or in costly weapons.

Its disadvantages ; it overloads the infantryman whom we desire to lighten, or alternatively it replaces some other weapon or article of equipment of perhaps more general value, for smoke as has already been shown cannot be used in all phases of the battle.

Very little can be carried ; perhaps only enough for use once during the course of the day.

Its use can never be controlled or co-ordinated by anyone higher than the company commander at the best, and often when it would be most effective, its employment will be most difficult to organise, owing to difficulties of pointing the target, and co-ordination of the production of the screen and the movement of the attackers.

Finally, the light tank ; its advantages. A very good screen can be produced almost independent of weather conditions.

It is easily controlled for the tank will always start from some distance behind.

Its disadvantages ; there are not always likely to be tanks available and therefore such a method must always be subsidiary.

The tank laying the smoke screen cannot be at the hand of the infantryman who wants it, save in exceptional circumstances. This method therefore savours of pre-arrangement and connotes some delay in preparation.

Lastly, there is little room in the present type of tank for any smoke-producing equipment.

We must now weigh the advantages of each of these methods against the difficulties of introducing them.

At home the 18-pdr, 3·7 how. and 4·5 how. all carry proportions of smoke shell, the last 25 per cent. in all echelons the former 11 per cent. This makes it possible to produce smoke effect whenever and wherever wanted, but it has its drawbacks. In those phases of the battle in which smoke is not wanted every battery has a lot of useless smoke shell in its wagons. When smoke is required on a fairly large scale it can only be obtained by co-operation of more than one battery and this takes time and organisation.

On the other hand smoke shells for artillery are easily carried, can sometimes be replaced in the wagons by man-killing shell, and in any case it is in attack, where smoke shell is most valuable, that artillery fire most ammunition; it cannot be too often impressed that artillery is primarily an offensive weapon. There is therefore no very great disadvantage attendant on the carrying of smoke shell with artillery.

The difficulties of carrying smoke shell for a mortar or indeed of carrying a mortar at all—are much greater. They have been stated above, but attention may be drawn to the difficulty of carrying the weapon and its ammunition on pack which is almost prohibitive. It requires a detachment of nine men, each bomb weighs 10 lbs. and only a dozen can be carried on a mule. If a fair supply of both smoke and H. E. bombs are to be carried the transport problem is desperate.

The infantry smoke grenade weighs about a pound. It is a question how to carry it. If every man carried, say, two each, a sufficient number would rarely be available on the spot and within control of the company or platoon commander directing its use; also each man would presumably have to carry a discharger (weight 3 lbs.) which would be most uneconomical; for if only a proportion carried dischargers the difficulty of organising the screen would be much increased. The alternative is to carry, say, five per man in selected sections; with the weight of the discharger this is an addition of 8 lbs. A lesser number of grenades would hardly do the job, for to put up a successful screen, however local, 20 grenades or so must be available

and probably only four or five men can be counted on at any given moment. It must be remembered here that it must be possible for the company or platoon commander to give these men very definite orders and control their fire absolutely and that within about 500 yards of the enemy. What equipment must these men give up to make room for the extra 8 lbs? Of the normal equipment carried 80 rds. of ammunition weighs 4lb. 13oz. and gives but little scope for reduction. It looks as if the smoke equipment must be additional, raising the summer weight on the man from 47 to 55 lbs.

The smoke-laying tank brings many difficulties. The employment of a tank will break up the organisation of the company which has little to spare already. How can this smoke be carried? Must it always be carried in every tank? If not, there is great risk it will not be there when it is wanted; that is to say, smoke-carrying must be a primary duty of every tank or else a specialist vehicle must be created. The laying of the screen presents another problem. In practice, in country other than the plains of India, single tanks must lay the screen, because the tank needs all the visibility it has to avoid rocks, nullahs, and so on; impeded by the smoke of its predecessor it will be very apt to lose direction or come to grief.

Now we can summarise in a way the advantages and disadvantages of the methods commonly advocated; for convenience they are tabulated below and given figures of merit. In the first column are the possibilities of producing a volume of smoke. In the second is the question of carriage. In the third is the prospect of control. In the fourth is that of ready availability for close co-operation; it may be pointed out that the last-named may often be paramount. The extent to which the introduction of smoke breaks up the organisation of the unit or interferes with its tactical employment is difficult to assess and has been omitted.

	Adequate volume.	Ease of carriage.	Facility of control.	Ready availability.
Artillery ..	100	100	100	40
Mortar ..	40	40	80	80
Grenade ..	20	20	20	100
Tank ..	60	60	100	20

So far the object has been to stimulate, qualify or even occasionally help to formulate the opinions of anyone who reads this. It has, however, been found that the best way to stir most of us to action or even to interest is to give us a chance of criticising something. So a skeleton proposal for developing "smoke-mindedness" is given below. It is based on artillery smoke as the best way of producing smoke-screens on anything but the smallest scale, on the minimum interference with present tactics and organisation, and on the belief that smoke, properly used in co-operation with troops trained in its use, can do a great deal for us.

The first question is, when is smoke to be used? The suggested answer is, firstly, in the early stages of the advance to give troops a chance to get forward in face of open country and the fire of unlocated machine-guns. Secondly, in the attack on a position more or less strongly held; realising that in such cases it is impossible to locate the whole of the position held without delays that are more favourable to the defence than to ourselves.

The second question is, what arms are to use it under normal conditions? The suggested answer is, that only the artillery shall carry it always, and in order to retain the maximum number of man-killing shells and at the same time ensure a sufficiency of smoke shell everywhere without the necessity for several batteries having to take part, to provide smoke shell for one type of gun only, that is, the 3.7 how. This would result in a change in the employment of mountain brigades. At the present time the mountain brigade in the division is regarded as a third field brigade, the only difference being its power to move across country on pack. Its rôle would have to be changed, and it would have to be used like the obsolescent light brigade at home, that is, for "close support," in order that the batteries may be available on any part of the front if they are required in the early stages. These batteries might carry 40% or 50% of smoke shell in the advance; in defence or withdrawal, this might be reduced by half.

The third question is, what subsidiary methods of producing smoke should be carried in the field? Certainly the rifle grenade, and probably the tank smoke candle. In the hills the rifle grenade would not normally be carried by the infantry though it might sometimes replace a proportion of Vickers guns. In such country obser-

vation for artillery smoke, and observation of the movements of our own troops, is not difficult, and on the other hand the use of smoke is uncertain, and cover for infantry movement is good. But in the same phase the tank cannot often be used in its normal rôle except on or near the road as an armoured car, and if winds are light and favourable in direction, a valuable smoke screen might often be laid from the road. The situation is changed in more open country. Here the tanks will be needed for other purposes and cover for infantry movement will be less. The attacking infantry should therefore carry smoke grenades when close contact with the enemy is probable under such conditions.

When all this has been decided there will still remain the most important part. The history of war hardly shows an instance where the value of a new weapon has been realised to the best advantage. Without intensive training, both on the plains and in the hills, of all arms in co-operation the use of smoke in moving warfare will follow the example of many of its predecessors, and its value will remain to be learnt through bitter experience in the opening stages of the next war.

It is quite common to hear the soldier blamed for his conservatism, lack of imagination and hide-bound methods. But there have been since the war some brilliant conceptions which have crystallised into methods of training the army. The first that may be mentioned is the War Office exercise. It was quite obvious that higher training by exercises with the limited numbers of troops available was impossible, both financially and practically, in the initial post-war period. A series of widely attended exercises without troops organised by the War Office was therefore used to beat out pressing problems; as examples the Oxford and Newmarket exercises designed to formulate methods of making "fire-plans" in attack and defence may be cited.

Then came the "mauve book" conception. It was certain that it would be a long time before large enough mechanised forces would exist to test their employment on a large scale; and also that much consideration would be necessary if money was not to be wasted in producing unsuitable fighting vehicles and organisations. A

paper mechanised army was therefore drawn up, used as a basis for theoretical exercises, torn up, re-written and so used again.

The education of the army in India in the possibilities of smoke may come into the same category. Imagination alone plays tricks with anyone. But "seeing is believing," and watching well-staged demonstrations is a most practical stimulant to the imagination. Accordingly the Taxila demonstration after much discussion and taking of opinions will be followed by another large-scale demonstration, then probably by many smaller ones, and meanwhile experiments will continue, plans will be made for providing the equipment, and the processes of organisation and training will develop the whole into a practical method of war.

It must be impressed that this time it is not tried and perfected methods that are being demonstrated. In some cases the material itself is still in the experimental stages. In no case have the troops or the officers who handle them been trained in these methods. We are merely opening up vistas of possibilities.

The man whose opinions are really wanted now is he who, senior or junior, officer or N.C.O., has experience of the forefront of the battlefield and has also weighed the considerations discussed above. He, before all, is in a position to give an opinion as to the respective value of different methods in different situations, and without his advice no satisfactory result will be reached.

There is much involved. We cannot afford to throw away tried weapons for an experiment, so some delay is inevitable. But the solution is pressing and we would all like to see "Smoke in Our Time."

THE INDIAN MILITARY ACADEMY.

(A LECTURE DELIVERED BY BRIGADIER L. P. COLLINS, C.B., D.S.O.,
O.B.E., COMMANDANT OF THE INDIAN MILITARY ACADEMY.)

Parents who eulogise and proclaim the virtues of their offspring are not unknown and, when known, are generally and rightly avoided. I stand in a somewhat similar position this evening for I am pledged to speak on the subject of the Indian Military Academy with which institution I have had the honour to be associated since its inception. It will be my endeavour, however, to present a sober account of this infant and to make no claims for it that have not been substantiated either by experience or by independent testimony.

Historical.—In 1918 partly in answer to insistent political demands of many years' standing that Indians should be given opportunities of service in the Indian Army equal to those enjoyed by their fellow British subjects, and partly in recognition of the honourable part played by India in the Great War, Indians were declared eligible to receive the King's Commission and a limited number were thenceforward admitted to Sandhurst and later to Woolwich also. The Montague-Chelmsford Report contains the following significant reference to this event:—"There remains one item, the importance of which in the eyes of India outweighs all others: British commissions have for the first time been given to Indian officers." The great political interest taken from that time forward in the subject of the Indianization of the higher ranks of the Indian Army is reflected in the discussions and resolutions of the Legislative Assembly in the years 1921, 1923 and 1925. It was, indeed, in a resolution of March 14th, 1921, that the establishment of a Military College similar to Sandhurst was, for the first time, officially recommended to the Government of India. The Skeen Committee of 1925-1926 marks the next milestone on the road and this Committee, in reply to the terms of reference affecting this particular question, recommended the establishment of a Military College in 1933. Finally, the Indian Military College Committee of 1931 was appointed, in pursuance of a resolution of the Defence Sub-Committee of the Round Table Conference, to work out the details of the establishment of a Military

✓ College in India to train candidates for commissions in all arms of the Indian Defence Services. This Committee, with H. E. The Commander-in-Chief as Chairman, assembling on May 25th, completed its agenda on June 20th and signed its report on July 15th. In comparison with many reports this suggests quick work and, when it is further realised that the Report was accepted almost in its entirety by the Government of India and the Secretary of State, and that practical working experience has occasioned few departures from its detailed recommendations, it will readily be admitted that for speed, accuracy and inherent soundness it could hardly have been bettered. Its task was, it is true, rendered easier by the exhaustive enquiries and recommendations of the Sken Committee.

For good or ill the die was now cast and the location of the future Academy, the appointment of the Staff to organise it and the announcement of the opening date were, in due course, the final and successive items in the programme.

✓ *Location.*—Dehra Dun was, in the end, selected from amongst a number of other competing stations. Climatically suitable in any case it was rendered the more suitable because, early in 1932, the Railway Staff College came into the market. It is probable that the sale of this College, a product of the short-lived post-war millenium, whilst proving a veritable boon to the buyers, afforded the sellers that mixed feeling of benevolence-cum-thankfulness that attends, one imagines, the disposal of a prematurely white elephant at little less than its cost price. However this may be, the fact remains that, in the Railway Staff College, the Army acquired a fine estate and buildings generally sufficient or adaptable to the immediate needs of the Academy. The addition since then of many fine buildings architecturally in keeping with the original buildings, together with the improvement of the playing fields and grounds, the rounding off of the estate by the acquisition of adjacent land and the natural beauty of the valley of the Doon, provide a setting which is not only worthy of this great experiment but the best possible testimony to the sincerity of purpose with which it is being carried out.

It is possible for me to state with confidence that the Academy has already laid the foundations of traditions not unworthy of the great military institutions of England where Indian cadets have hitherto been trained and to which, on this account, India is greatly indebted..

Such progress as the Academy has made during the two years of its existence is due, as I see it, essentially to three factors :—

- (1) The consistent moral and material support of the Army in India from H. E. The Commander-in-Chief downwards and that at a time of unexampled financial stringency.
- (2) A Staff that believe in the wisdom of the decision that gave India its own Academy and whose duty and pleasure it has been to organise and to administer it from the beginning.
- (3) The co-operation, keenness and goodwill of the cadets.

The progress and promise of the Academy is shortly to receive signal recognition at the hands of His Majesty The King-Emperor who has been graciously pleased to approve of the grant of Colours and to make a personal gift of a banner for the Champion Company. In a loyal community such as the Academy represents, this mark of His Majesty's favour is as encouraging as it is deeply and sincerely appreciated.

The Academy in being.—The Academy opened on October 1st, 1932, with forty cadets and has now, and recently, completed its fourth term. The Staff, which is about to reach its full establishment, consists of nineteen British officers, two Indian officers (one of whom teaches equitation) and eight British warrant officers for drill and physical training. The course lasts for two and a half years : there are two terms annually and the intake of cadets is forty *per term* with a total maximum of two hundred. Each batch of forty cadets is made up of fifteen by open competition, fifteen selected from the Indian Army and ten from the Indian States. The maximum output for the Indian Army is thirty cadets *per term* (sixty *per annum*).

The Academy combines the functions of both Sandhurst and Woolwich and the course of instruction, whilst generally following and indebted to those in force at these institutions, differs from them in some particulars. In the first place, the course lasts for two and a half years as against one and half, this being necessitated by reason of the extra grounding in English, elementary mathematics and geography that is at present required and these subjects figure largely therefore in indoor instruction in the first year. Secondly, considerably more time is allotted to drill and to physical training for reasons that will shortly be made apparent.

The Syllabus.—The syllabus lays down as its objects :—

- (a) To develop in the cadet the characteristics of leadership, discipline and physical fitness : to instil in him a high sense of duty and of honour and a realization of the responsibilities of a servant of the State.
- (b) To ensure that a cadet on joining his unit will be in a position to discharge the essential duties of a platoon commander.

This second object (b) is in contra-distinction to that of Sandhurst where in the words of the syllabus " no attempt is made to turn out a trained executive officer." The divergence is intentional for the reason that it is deemed essential to give Indian cadets, some of whom have no military training or traditions and the great majority of whom lack the advantages conferred by a public school education, the training that will best develop character, responsibility and capacity for command. The training given will, I most firmly believe, enable cadets of the I. M. A. to take their places in the Army from the first with confidence and success. Without this executive training, however, it is probable, if not certain, that the young officer, on first joining his Indian Army unit, would be gravely handicapped, for it must be remembered that for some years to come he will be serving alongside the very man he is eliminating from the Indian Army, the Viceroy's Commissioned officer, whose prestige is rightly high, to whom British officer and sepoy alike have been accustomed from their youth up and for whom they have great respect. The importance, therefore, of executive training in the syllabus of the Academy can hardly be over-emphasized.

The Cadets.—And now to turn to the real focus of interest, the cadets themselves. Theoretically I should like to inform you that they combine the brains of the I. C. S. with the courage of lions and the physique of a Samson, but without the latter's penchant for Delilah ! Actually we have to be, and are, content with something less than this. Speaking generally it is true to say that, in comparison with their contemporaries of the English public schools, Indian cadets on entering the Academy are, with few exceptions, handicapped to a greater or lesser extent both educationally and physically. In addition to these handicaps there are the very real difficulties of having to imbibe instruction in an alien, and often an imperfectly understood, tongue and of having to " tune in " (to use a modern expression) to

a life of discipline, order and punctuality, which we may regard as routine, but which, I am led to believe, is rare if not almost unknown in Indian scholastic circles. It is, therefore, with very great pleasure that I can say that these difficulties and handicaps are being met, and largely discounted, by a keenness and determination on the part of the cadets that is wholly admirable. I do not mean to suggest that we have no failures. We have, and they are too many for our liking, but they should diminish as time goes on for they are due to faulty upbringing and education and rarely to want of effort. [These young men are of all castes and creeds, come from all parts of India and the highest and the humblest families are represented. We have, to mention only a few, Hindus, Mohamedans, Sikhs, Bengalis, Anglo-Indians, Indian Christians and Parsis. They all meet, so to speak, on a common platform and with a common purpose, that of becoming Indian officers in the true sense of the word. The communal life of the Mess, the levelling experiences of the parade ground and classroom, the wearing of uniform and the grey flannel suit and Academy tie which constitute the mufti of the I.M.A., soon reduce appearances to a common denominator where a young man is judged more by the character that he possesses, the progress that he makes, and the grit and nerve that he displays, than by the fortuitous possession of martial traditions, family or wealth, valuable though these may be.] The cadets are organised in four companies of fifty each, each company having a Cadet Under Officer and a proportion of Cadet Sergeants, Corporals and L./Corporals. Every cadet has a room to himself and all have their meals together in the Mess, which is capable of seating 250 and has a raised officers' table at one end. The meals served are those common to an officers' mess except for the exclusion of beef or pork. The Viceroy's Banner hangs behind the Champion Company for the time being and on the walls of the Mess is a fine collection of big game trophies presented to the Academy by the Sikh Pioneers. The Inter-Company Championship is fought out each term, points being awarded for skill-at-arms, riding, boxing, swimming and games. Boxing is only in its infancy and the first inter-company tournament was held last term. It was not, as may be imagined, remarkable for skill, but the pluck, determination and good temper of those that took part came as a revelation to the Staff and was the subject of favourable comment on the part of visitors whose opinion was of value. The trophy for boxing was the generous gift of the officers of

the Royal Corps of Signals in India, and other regiments and well-wishers of the Academy have made presents that are equally appreciated. As with boxing, so with games which are played in a spirit that need fear no comparison elsewhere. The standard of hockey, not unnaturally, is high, that of other games moderate but improving. The inclusion of grading tests in riding, swimming and physical training opens up, to cadets with no particular aptitude for games, opportunities for pulling their weight in their companies, and has also led to marked progress in these subjects and especially in physical training. The encouragement of the all-rounder as opposed to the expert is aimed at in all things. The daily programme of work is as strenuous as in similar institutions and five periods of fifty minutes each, two before breakfast and three after, fill up the morning pretty thoroughly, whether the instruction is given in or out-of-doors. Included in this instruction is a short course of carpentry and motor engineering, which has already proved to be interesting to cadets and of real practical value. The afternoons are very fully occupied with organised games and riding, but time for private study is provided by two "quiet" periods, one before and one after dinner. The Academy is fortunate in having as neighbours in Dehra Dun artillery and infantry units who are ready and willing to provide demonstrations, and further afield but equally appreciated are the demonstrations given by the Bengal Sappers and Miners at Roorkee. The Doon affords excellent facilities for minor tactical training in the vicinity of the Academy and, in addition, cadets of the senior terms go into camp for a week in each of the last two terms. The first of these camps was held in May last and was a great success.

The "Humanities."—In such a busy life as I have depicted the "humanities" are rather apt to be crowded out, but an interest in matters other than military is stimulated by lectures, by visits to institutions such as the Forest Research Institute, and the Geodetic Survey and by weekly gramophone recitals. An interest in, and some appreciation of, Western music is encouraged by the latter and the ears of the Staff attuned or otherwise to the mysteries of Indian music. In the early days of the Academy an impassioned operatic song by Caruso struck many of the cadets as so humorous as to cause laughter. This is perhaps the counterpart of the attitude of most Europeans to what they would term the more aggressive type of Indian howling love song. Now Caruso and "Malka Jan" are received with the

respect due to them whilst "The Lion and Albert," "Sea Shanties," "Military Marches" and even orchestral pieces are welcomed with acclamation. Humour, that saving grace, is seldom far distant and the somewhat prevalent idea that Indians are deficient in this sense cannot be supported at the Academy. The first, though unconscious, example occurred the day before the Academy opened when I received a postcard addressed to me by name announcing that the sender would be unable to report at the hour laid down as he proposed to spend the day (more pleasantly no doubt) in Mussoorie. All unconscious of his doom the author of the postcard was met at the railway station early the following morning by my Adjutant and in a few minutes found himself, in company with other new comers, heading for the Academy whence Mussoorie is but a view, though a beautiful one. Shades of the prison house had begun to close! Again, we had occasion to ask for certain measurements by post before the Academy opened, two of the questions being:—"What is your size in hats" and "What is your size in boots." One cadet gave the not very helpful answer of "six feet" to each query. On his arrival and on further enquiry it transpired that, taking the questions literally, he had measured himself first without boots but with his hat on and then with his boots on but hatless. I am not at all sure that he did not give a very reasonable answer to the questions as put to him. Equally reasonable was the cadet who, when asked during a tactical exercise "how many reconnoitring patrols will you send out and who will find these patrols," said to his instructor "I don't quite understand the latter part of the question, Sir, surely reconnoitring patrols ought not to be found." In a recent novel entitled "England, Their England," which may be familiar to many in this audience, there is one of the most amusing descriptions of a village cricket match that has ever been written. It is interesting to know that this chapter, when read by an instructor to his class during a lesson in English, was much appreciated and the humour clearly understood. Humour of a more robust or knock-about type showed itself on April 1st of this year and took the form, not unknown at Sandhurst, of the removal of war trophies such as howitzers, field guns, mines and the like to other and less convenient places and the substitution of the name boards of instructors with legends such as "hairstresser," "sports shop," "danger," etc. It was all good humoured and much to be commended on the score of organization, even though the illegal

night operations, which the work entailed, caused retribution to fall both on the guilty and the innocent. End of term concerts, run by the cadets themselves and very well run too, have provided opportunities for burlesques and sketches in which the mannerisms of the Staff and more especially of the Drill Staff have been more or less faithfully depicted.

Relationship of Staff and Cadets.—What I have said tends, I think, to show that an excellent spirit exists at the Academy and that the relationship between the Staff and the Cadets is good. This relationship, in a community where the instructors are of one race and the great majority of the instructed of another, is of such importance that I propose to devote a few words to the subject. In the Indian Army the British officer has been for many years in a position of unquestioned superiority because he alone held the King's Commission. With the grant of commissions to Indians, and with their admission into the higher ranks of the Indian Army, this position has altered to one of equality. The re-orientation in outlook that this entails comes easily to some and less easily to others, but, once made, it leads, I am convinced, to happier and better relations for both parties because of the removal of artificial barriers. It is certain, that the instructor who has made it will never lack, at the Academy, the respect and affection that was his in his Unit under the old régime. "The old order changeth" and it is the new India and not the old with which we are dealing. Lady Oxford is reputed to have said that Englishmen are at once the most modest and the most arrogant of men. In the atmosphere that it is our desire to create at the Academy, arrogance has no place, whilst modesty on our part will encourage this quality in those young men—and they are not few in number—who are deficient in this respect. In the encouragement and promotion of good relations, the part that can be, and has been, played by ladies deserves special mention. The value of an instructor whose wife sees eye to eye with him in these matters cannot be measured in words. We have, at the Academy, cadets who are as at home in English society as we are ourselves and who naturally desire to continue associations which they have learnt to appreciate. At the other end of the scale we have cadets to whom Western ways and customs are a sealed book: as witness the young man who, although provided with a long bath and modern sanitation, preferred on first arrival to perform his ablutions in the canal near by: or the other young man who after a

talk from his Company Commander on the duty of lending a helping hand, on being invited out to tea, seized the teapot from his astonished hostess and flatly refused to give it up. I mention these trivial incidents with the sole object of emphasizing the need and indeed the necessity for much closer social contracts than are required, for example, at Sandhurst or Woolwich. Much of course is now learnt from the corporate life of the Mess but it is, perhaps, in the houses of the Staff that many of the habits of polite society will be acquired by those who are little acquainted with them with obvious advantage to their future careers. Let me frankly admit that this spells effort, but it is worth while effort and by no means altogether one-sided if it leads, as it must, to a better understanding. For it is at times such as these that officialdom disappears and is replaced by a candour and a confidence that may not find expression elsewhere. The greatest value of this good relationship lies, in my opinion, in the fact that it creates an atmosphere in which all matters affecting Indianization in the Army (and they are legion), whether pleasant or the reverse, can be discussed dispassionately and cadets prepared, as far as may be, to travel with courage and good heart a road that must inevitably lead uphill, if not to the very end.

During its short life the Academy has had a number of visitors. Without exception they have professed themselves as impressed with what they have seen and even "diehards" have scarce forbore to cheer or at the least have gone away shaken. One Indian gentleman was heard to exclaim after a visit of inspection "It is like turning iron into steel." This is as may be. All that can be claimed for the Academy is that it is prosperous and happy, and that, judged by critical standards and without fear, favour or affection, it has more than justified its existence. One word more. There is a school of thought that says, in effect, that the young Indian is at his best in an institution of this kind, but that he will fail to stay the course when faced with the responsibility and the routine of the Army. This has sometimes been true in the past and no doubt may be in the future, but I cannot personally bring myself to believe that this is the lot that is going to befall many of the fine young men with whose work and worth I have become so intimately acquainted. They, at any rate, could pay the Staff of the Academy no greater compliment, or give them greater pleasure, than to falsify this prediction in the life that lies before them. I will end this lecture with a sentence taken from a

passage in the Upanishads, written in India many hundreds of years ago, in which a teacher is giving parting advice to a student. It is so peculiarly apt in an institution where, as I have said before, instructors and instructed are of different race, that the Academy might well adopt it as its Staff Motto. The sentence is this :—"Copy our example only in acts in which we are free from blame, and not in those liable to be called in question." The responsibility of the Staff is great and their duties require to be discharged with efficiency, sincerity and above all with understanding. I believe that they are so discharged.

SATURDAY TO FRIDAY.

AN AIR JOURNEY.

By "MOUSE."

One of the reasons why I recently decided to fly from London to Delhi was to investigate personally all this air business ; secondly, because I won a packet at the Derby on Windsor Lad and Easton ; and thirdly, because a very charming lady—anyway, I had an extra week in London to see the Zoo, the Royal Academy and the Kensington Museum.

On Saturday the charming lady and I arrived at Airway Terminus, Victoria, and with several other passengers formed up along a counter, had our tickets examined, were given instructions and finally I found myself on a weighing machine with two suit cases. I was eight pounds overweight, and when they explained to me that each extra two pounds to Delhi would cost half a guinea I presented my overcoat to the charming lady ; still overweight, so I then (amid scenes of indignant excitement) disembowelled a suit case and presented my girl friend with "The Manual of Indian Military Law," the latest "Field Service Regulations," and Mr. Lloyd George's rather forgetful "War Memories." I then, though deprived of my light reading for the journey, weighed one hundred kilograms (221 lbs.), the correct riding weight.

The 'bus got us to Croydon some minutes late, and the passengers were herded rather too efficiently into the Passport Examination Room. After being rubber-stamped I returned to say good-bye to the charming lady. A London policeman, if you please, barred my way with a fist like the front of a butcher's shop. "You can't get back, Sir," he said. "Can't I ?" said I, and ducking under his arm I succeeded in bidding my charming aunt a polite good-bye.

The "Heracles" lay panting on the tarmac. I climbed up the gangway, saluted the quarter deck, and entered. Not a soul paid the slightest attention and there were thirty passengers. A steward took my seat ticket and said the numbers had been changed and that I should sit on No. 17 and not on No. 21 ; so I sat on No. 4 and, still, nobody paid the slightest attention. Remembering my aunt's advice I sat with my back to the engines, but unfortunately there were two

more in front. Placing my overcoat (thoughtfully returned by the charming lady) on the rack I absent-mindedly pulled out a cigarette. "You can't smoke," declared a great man opposite. Blushing like a virgin lobster I apologised to the ship's company. Sitting beside the Great Man was a Peach, who looked at me—unlike the other British passengers—as if she did not mind me. I offered her the copy of the "Manual of Indian Military Law" which she accepted with a graceful blush.

"Ever done much flyin'?" inquired the Great Man. We all protested at the imputation. "Huh!" he said scornfully. "I've done a lot. Air force in the war. Business on the Continent since. Always fly. Everywhere. Only way. Didjer see that Air France disaster here last week?" Suddenly there was a roar as all the engines were accelerated. The "Heracles" lumbered down the aerodrome, turning at the end in the unknown hay like an elephant, and then the roar increased and we sped down into the wind and in a moment or so the squat, concrete buildings of Croydon were eddying below.

"I saw the corpses"—continued the great man above the engines' roar—"and one of the women was screaming with fear when she died"—he yelled. The Peach looked sick and lifted the Manual, as if to strike him, but she was too nice. I winked at her in a cavalry manner, and thereafter we were friends. It is a good thing, I have discovered when travelling, always to give your heart to a woman to wear.

And then we were flying over the south of England, that lovely soft country with its great dark splashes of forest, its gentle valleys and shy little hills; houses tucked away in woods, rippling roads, tidy villages, and all as clean and trim as Ireland is otherwise. From the dignified height of 4,500 feet, I gazed down upon it and wondered—for the hundredth time—why the English are so inconsistent. In England everything is so ordered and dignified; the police, the licensing laws, the income-tax, the tubes, the good manners of strangers, the neat villages, tarmac roads, keepings off the grass, shutting ups the Parks and everything; and yet, outside England, is her Empire where every Dominion and possession is ruled or persuaded to rule itself in the most untidy, unlicensed, and sometimes ill-mannered fashion. Extraordinary, I mused, as the Heracles dived off Beachy Head and opened her throttles to the English Channel.

"Luncheon, Sir?" inquired the Steward, full of napkins and forks. "Have a cocktail," suggested the Great Man and, feeling like Alice in Wonderland, I accepted a dry Martini, and, what is more, drank it as avidly as on dry land. I patted the Maldemer Plaster glued on my diaphragm and called for some more. We ate cold beef, ham, tomatoes, potatoes, followed by iced pineapples and coffee. Then the curiously inundated coast of France showed up at Criel, and I looked down hopefully for the war area ruins. Naturally enough there were no signs of war—we were a hundred miles south—and, when I realised my geographical error, I had nothing to do but either look down on the vast panorama of France or at the Peach. France is a lovely country to fly over, I must do it again.

We got to Le Bourget at 2-30 p.m. and were whisked off in an omnibus to the Hotel Ambassadors for tea. The Peach asked me if I had a cushion for the small of my back (my only serious hollow), and dragged me immediately to the Lafayette Galleries, which were crowded for the Summer Sale. Screaming "Cushions" in nine languages the Peach raced me up seven flights of stairs to the Upholstery Department whence I bought a cushion (with a pattern like a R. A. F. map) for six francs. When we got back to the hotel the local Imperial Airways Officials (of whom I have a lot to say) escorted us to another bus and transported us to the Gare de Lyons.

I had a *wagon lit* to myself and travelled from Paris to Brindisi with all the pomp and ceremony reserved for such recumbents. The fact that one has to travel by rail from Paris to Brindisi rather spoils the fun of what one thinks is an all-air journey; but the French and Italian Governments have so far refused to offer any flying facilities to Imperial Airways, and at the moment therefore the train journey is unavoidable. Negotiations for flying permission to Marseilles and thence by sea plane to Brindisi and Egypt are in progress and will, one hopes, fructify into an international agreement regarding commercial flying over foreign territory. However, I slept and read in the utmost comfort for thirty-six hours and at some awful hour—3 a.m. Monday morning—I was awakened at the drowsy little port, Brindisi.

At a hotel on the quay I was offered coffee and an omelette at 4-30 a.m. I looked at my fellow-passengers and retired to the only bathroom to shave. Feeling less worse, I joined the ladies on the quay in the dawn and watched a large cargo boat being moored. One

of the hawsers snapped and the ship plunged about like an infantry charger. How un-British we all thought, and felt better. An Imperial Airways Officer asked us to board a lugger and we were taken over the harbour—past that extraordinary but rather effective cubist Brindisi War Memorial—to the Imperial Airways Flying Boat “Scipio,” riding easily at anchor. She is a lovely boat; four 555-h.p. air-cooled engines, span 113 feet, length 78 feet, height 23 feet, and speed 135 m. p. h. A large cabin with kitchen and lavatory attached, and the Pilot quite captured the Peach’s heart of stone.

The Great Man, who by this time I had found out—(he told everybody in fact) was a Conservative member of Parliament, a diehard, a blowhard and, I think, rather unintelligent, clambered on board, bagged the best seat, pulled me down beside him and asked me what I thought about India. The engines back-fired in unison, then roared into gigantic harmony, the waves flushed and then mounted the cabin windows like a gale at sea; the Scipio soared forward, lifted, kissing the waves good-bye and in a moment we were circling in the air like a gull—a lovely experience. All the tumult of the waters died below. “I said to Winston Churchill only the other day”—the M. P. was booming as I watched the lovely Italian coast go by—“that what we need is guts. Look at Clive, look at Lawrence, look at Dyer, look at Curzon.”

“Look at that!” cried the Peach pointing to a small fishing fleet thousands of feet below all slanted at the same angle to the wind, their sails lit primrose by the rising sun. She and I there got excited together looking overboard, vastly more exciting than India and its vulture-like politicians.

It was a wonderful day’s flying, the impressions of which came so fastly one upon the other that it is difficult to sort out one’s memory. Brindisi—Athens—Crete—the Mediterranean at its bluest and loveliest—Alexandria—and finally Cairo in the starlit night. In seventeen hours I was swept from the history of Rome through the history of Greece, across the history of the Phœnicians and Venetians, towards the land of the Pharoahs and all its tumultuous past. I felt like Ulysses. He, poor chap, suffered and endured many horrific adventures on his journey home from Troy; but, lucky fellow, he didn’t travel with an M. P. That discomfort, let me hastily add, was the only one in a long day’s journey, and as I kept irritating it I have only myself to blame.

Before eight o'clock we were off Corfu, flying as steadily as a rock with the hills of Thessally standing out greyly from a jelly-like sea. The 250 miles onwards to Athens were more interesting to watch than the sight of my fellow-passengers who, in unlovely attitudes, were sleeping; Thessally has the same beige colour as Baluchistan enlivened soon by the sight of Parnassus rearing its 9,000 feet into the clouds. Below a deep gash, the Corinth Canal, and then Corinth itself laid out in gamboge squares. After Corinth a mild bump or two alleviated by some tea and a ham sandwich.

At 11-30 we reached Athens, a vast yellowish city sprawling untidily along the sea-shore. There we landed, and not until I become an Air Marshal shall I get accustomed to that queer feeling when the speed is reduced, the aeroplane turns over on its side, the earth becomes a chaotic moving wall and one's duodenum (I think) seeks exit from the back of one's neck. It was soon over. With a scurry and splash we lighted like a duck, and were soon being moored to a buoy. A launch removed the passengers ashore while petrol was being shipped and we repaired to a sort of dak bungalow on the quay. This was the only lodging during the whole trip which deserves adverse criticism. The wilds of the Persian Gulf and Baluchistan produced more adequate arrangements than Athens, the ancient home of culture. The bath-rooms were dirty and the mechanism did not work.

Leaving Athens at 12-20 p.m. we bumped about a bit until we got properly to sea, then a peaceful doze until we landed at Crete in the land-locked bay of Mirabella at 2-45 p.m. While petrol was being filled up the passengers were taken to the Imperial Airways yacht and given tea. The surrounding country, consisting of barren, sparsely inhabited hills, was not attractive and reminded me of Chaman. The three officers of the yacht looked bored with their existence and I don't blame them. To enliven their compulsory inactivity they had persuaded the local Greek police officer to learn bridge, but he was finding the pastime both difficult and expensive. Their only other neighbours were lepers on an adjacent island.

Off again at 3 p.m. skimming the crest of the Cretan mountains with little to spare and our course set due south for Alexandria. The Great Man was explaining to the three female passengers the difference between Greenwich and Continental times. He was not being

particularly lucid about it but as he had just presented a clock to the Blackpool Municipality he was obviously an expert. So I slept with the three ladies, lulled by the tireless murmur of the engines and the boom of the Great Man's voice. We flew at about 5,000 feet all the afternoon and evening over a calm and almost uninhabited Mediterranean Sea. A head wind delayed us and not till it was quite dark at 7-30 p.m. did we reach Alexandria.

Below us lay the great harbour outlined in square and lines of electric lights, ship lights and light-houses. As we descended sharp fear caught my throat; there was hardly a blank space, and everywhere small launches and vessels were scurrying about on the fairway. Just as we were about to collide with a cargo steamer the pilot swung right—over a very knobbly breakwater—and in a minute we were swishing along an avenue of water flanked by great yellow flares. The Great Man said it was as good as landing as even he had ever seen, and asked the Steward why the hell we were an hour late.

A hot, smelly half hour followed while petrol was being pumped aboard. The Egyptians descended upon us in force, and examined luggage and passports. Ever since Jehovah plagued the Egyptians they have then getting their own back on mankind. The take-off was exciting. We taxied out into the harbour to a clear place, the engines were opened full blast, the waves rushed past the windows—and then suddenly silence, a half turn and we missed a buoy, or a tramp or a light house by feet. At the next attempt we rose like a bird and circling Alexandria sped the 120 miles to Cairo through the night.

(To be continued).

TWO LECTURES ON THE MESOPOTAMIA CAMPAIGN.

6th November, 1914, to Capture of Kut-al-Amara on 29th September, 1915,

Part II.

BY MAJOR J. E. SHEARER, M.C., 15TH PUNJAB REGIMENT.

18. *Fourth Phase—The Capture of Amara* (vide *Sketch Map No. 3*).

(a) *Situation*.—This phase is possibly the most unusual and most interesting of the whole campaign.

The problem which General Townshend (the new G. O. C., 6th Division) had to solve was no easy one. You can read the details for yourselves in the Official History. They are very interesting. Briefly the situation was as follows:—

The 6th Division was holding Qurna, while some six battalions of Turks with 10 guns were holding a position on some sand-hills at Abu Aran about 8 miles above Qurna. The ground between Abu Aran and Qurna was entirely under water which was so full of reeds and was so shallow that no craft bigger than local "bellums" could cross it.

Sticking out of this intervening sheet of water were five sand-hills, each 100 to 150 yards broad, which the Turks were holding as a covering position (vide *Sketch Map No. 3*).

You will notice that One Tree Hill on the left bank enfilades Norfolk Hill and One Tower Hill.

The Tigris was known to be heavily mined. ✓

But General Townshend had a call on one or two aeroplanes, so his information of the enemy's defences was accurate, and his guns were able to register each of the sand-hills in the enemy's advanced position without moving outside the Qurna defences.

(b) *Plan of attack on Turkish position, North of Qurna*.—As the only possible method of approaching the Turkish position was in small boats, General Townshend decided to make an amphibious attack in three stages. ✓

(i) *The first stage* was to be the capture of the Turkish covering position by the 17th Infantry Brigade in "bellums"; with machine guns and mountain guns accompanying them on rafts for close support.

- (ii) *The second stage* to be the capture of the main Abu Aran position by the 16th Infantry Brigade which was to be landed near there from river steamers.
- (iii) *The third stage* would be the pursuit in ships.
- (iv) Meanwhile, General Gorringe was to co-operate by a demonstration with the 6th Cavalry Brigade and part of the 12th Division from Bisaitin towards Amara.

The main artillery covering fire for the first stage would be by every available gun, other than the close support mountain guns on rafts, from positions at Qurna from which they had already registered the five sand-hills in the enemy's covering position.

For the attack on Abu Aran General Townshend was to move his land artillery forward to the captured covering position; but the main support would still be provided by the naval guns at Qurna.

For this attack the 17th Infantry Brigade were organized in bellum flotillas at 10 men per bellum and 16 bellums per company. One-quarter of the bellums only were armoured. But much practice was required before the men became reasonably proficient at punting and manœuvring their "bellums."

- ✓ (c) *Attack on Covering Position, 31st May, 1915.*—The attack commenced at 05-00 hours on 31st May and all went even better than was expected. The 22nd Punjabis on the left bank rapidly
- ✓ captured One Tree Hill with very few casualties. The artillery covering fire was then concentrated in turn upon each of the four hills on the right bank, which were captured with very few casualties to ourselves by the remainder of the 17th Infantry Brigade. The Turks suffered very heavily from our concentrated artillery fire on these previously registered targets and offered very little resistance to our infantry in "bellums."

The whole covering position was in our hands by early in the afternoon, and the 22nd Punjabis then rejoined their Brigade on the right bank, while the 16th Infantry Brigade remained in their ships, ready for the next day's attack on Abu Aran.

- ✓ (d) *Attack on Abu Aran Position on 1st June, 1915.*—The plan for the attack on Abu Aran position was for the 17th Infantry Brigade to continue their advance in "bellums" at dawn on 1st June, covered by the fire of all our guns, while the 16th Infantry Brigade followed in ships, ready to land and complete the attack.

Sappers and mine-sweepers accompanied the 17th Infantry Brigade to clear the Tigris of mines ahead of the 16th Infantry Brigade steamers.

At dawn our guns opened fire on the Abu Aran position, but obtained no reply from the enemy. Very soon General Townshend received an aeroplane report that the Turks had abandoned that position and were in full retreat up the Tigris in whatever craft they could muster.

(e) *Pursuit and Capture of Amara.*—General Townshend consequently determined to pursue with the greatest boldness. He himself with four very small armed launches and a mere handful of men dashed straight through to Amara, while the 17th Infantry Brigade and a Field Battery embarked in river steamers and followed him. The 16th Infantry Brigade were left to occupy the Abu Aran position.

The Turks were so demoralized that as soon as General Townshend's tiny party arrived at Amara at 13-30 hours on 3rd June, the Governor of Amara, 30 officers and 700 men surrendered to him, although the leading troops of the 17th Brigade did not arrive there until 06-30 hours the next morning.

On 3rd June the Turks retiring to Amara from Bisaitin were shelled and dispersed, abandoning two guns. They were completely surprised as they did not know that there were any British troops at all in Amara.

On 6th June the 16th Infantry Brigade arrived at Amara and by 18th June the 12th Infantry Brigade and 7th Lancers had also marched to Amara from Bisaitin.

Thus ended the brilliant operation which is sometimes known as "Townshend's Regatta." The oil-fields and Basra had been rendered safe from any further Turkish aggression, *via* Awaz or the Tigris at a cost to ourselves of only 25 casualties; while, quite apart from their heavy battle casualties, the Turks lost 17 guns, a gun-boat, 5 river steamers and 1,773 prisoners.

General Townshend had been amazingly successful in spite of tremendous difficulties and intense heat.

(f) *Lessons of "Townshend's Regatta."*

- (i) *Moral effect of surprise.*—Perhaps the biggest lesson of this “Regatta” is the moral effect of surprise and determination in the face of apparently insurmountable difficulties, particularly when the enemy’s morale is already shaken. No doubt the Turks considered their position in the flooded area impregnable. But the overwhelming and very accurate concentrated artillery fire combined with the steady advance of the infantry in their frail craft so shook the Turks that they became panic-stricken, in spite of the fact that certain first class Anatolian Turks were also present at the battle.
 - (ii) *Commanders not becoming “hide-bound.”*—This battle is a good example of the advantages to be gained by commanders who keep their brains mobile, instead of allowing themselves to become hide-bound by stereotyped methods. You will remember that this is a point which the Commander-in-Chief repeatedly stresses in his Training Memoranda.
 - (iii) *Bold and immediate exploitation of success.*—Considering the tiny force with which General Townshend carried out his real pursuit, the results of his boldness and promptitude in taking full advantage of the enemy’s panic are nothing short of marvellous. But these results show what can be done by boldness in pursuit before a demoralized enemy has had time to pull himself together.
 - (iv) *Danger of occupying obvious defensive positions which can be previously registered by the enemy’s artillery.*—It might be said that our guns won this battle. The defenders of Norfolk Hill were practically annihilated by shell fire before our infantry arrived there. The example of Norfolk Hill was probably the principal cause for the collapse of the morale of the Turkish force, most of whom, at that period, were not of their best fighting material.
 - (v) *Reason for very small casualties among Bellum-borne Infantry.*—I shall show the reason for this when discussing the capture of Nasiriya, in which battle the casualties of our bellum-borne infantry were high.
19. *Fifth Phase—The Capture of Nasiriya.*
- (a) *Policy and force detailed for operation.*—After a good deal of correspondence, orders were given in June for the occupation of Nasiriya in order to protect Basra from Turkish incursions, via

the Euphrates or the Shatt-al-Hai; but the Government of India by this time were evidently in favour of an early advance to Kut-al-Amara and Baghdad and so grudged the detachment necessary to take and hold Nasiriya. The task was given to General Gorringe, the G. O. C., 12th Division; but only his own Headquarters, the 30th Infantry Brigade and a few attached troops were allotted to him in the first instance for this task.

(b) *Narrative of Capture of Nasiriya.*—I cannot spare the time to say much about these operations. The difficulties of moving troops and stores were enormous, as the Hammar Lake, where the water was at that time only three feet deep, had to be crossed in bellums.

The advance commenced from Qurna on 26th June and after hard fighting and much physical exertion in poling their bellums through reeds and in dragging their bellums and stores over the mud, the 30th Infantry Brigade had captured the Akaika Channel, at the Western entrance of the Euphrates into the Hammar Lake, by 5th July. But the 12th and 18th Infantry Brigades had to be sent to General Gorringe before he could capture the main Turkish Majinina position, which was astride the Euphrates just south of Nasiriya.

The Majinina position was captured on the 24th July after very hard fighting from which comparatively few Turks escaped up the Shatt-al-Hai.

Nasiriya was occupied on 25th July without further opposition.

(c) *Lessons of Fighting about Nasiriya.*

(i) *Covering fire for attacks by infantry in small boats.*—The attacks on both the Akaika Channel and at Majinina had been carried out in bellums on much the same lines as in "Townshend's Regatta"; but with much greater loss to ourselves. The reason for this is that General Townshend's objectives were definitely known, previously registered and easily observed artillery targets. At Qurna our guns literally blasted a way for the infantry attack. On the Euphrates reconnaissance difficulties were much greater and the enemy's exact positions could not be ascertained accurately beforehand. Consequently General Gorringe was forced to rely for his covering fire mainly on close support guns and machine guns moving with the infantry. The enemy's trenches were too

invisible to render this form of fire support really effective ; so our infantry suffered badly and were only successful as the result of great gallantry.

That seems to be the main difference between the otherwise somewhat similar form of amphibious attacks used by General Townshend and by General Gorringe.

(vi) *Should small boats be armoured for such attacks?*—The answer in these cases was definitely "No." General Townshend's troops had the greatest difficulty in pushing their armoured bellums through the thick reeds ; and voluntarily spent many hours during the night previous to the proposed attack on Abu Aran in removing the armour from their bellums.

Had General Gorringe's bellums been armoured, the troops could never have got them to Nasiriya at all. No animals could be used as the ground was too wet. So the troops had to work and fight for 20 consecutive days man-handling all their stores and often dragging their bellums across the mud for long distances in a damp heat with a shade temperature of about 113°F. So General Gorringe's troops put up a very fine performance of determination and endurance.

20. *Sixth Phase—Capture of Kut-al-Amara.*

[a] *Situation by end of July, 1915.*—The capture of Nasiriya completed the carrying out of General Nixon's original first objective, i.e., to secure the whole of the Basra Vilayat ; but unfortunately neither General Nixon nor the Government of India were willing to leave matters at that.

The Secretary of State kept on protesting that Mesopotamia was a side-show where we ought to remain on the defensive as long as the oil supply for the Navy was secure ; but for political reasons connected with our failure at Gallipoli and the raising of British prestige in Persia, and on the North-West Frontier of India, the Government of India succeeded first in persuading the Secretary of State to agree to our advance to Kut-al-Amara and after our success there to the disastrous attempt to advance to Baghdad in November 1915.]

The capture of Kut-al-Amara was pressed for as a strategical necessity to deny the Turks a line of approach to Nasiriya and Basra, *via* the Shatt-al-Hai, and so enable us to reduce our Nasiriya detachment to a minimum.

I shall not say any more about the very unwise decision to advance to Baghdad as it comes just outside the scope of this lecture.

(b) *Situation at Es Sinn just previous to Battle of Kut-al-Amara* (vide *Sketch Map No. 4*)—In order to cover Kut-al-Amara the Turks had taken up a defensive position astride the Tigris at Es Sinn some six miles North-East of Kut-al-Amara, with a covering position at Shaikh Sa'ad about two days' march still further down stream. By 15th September the total Turkish force in the area numbered about 7,000 rifles and 38 guns of the 35th and 38th Divisions and 2,000 regular cavalry.

By that same date General Townshend's Division plus the 30th Infantry Brigade and two regiments of the 6th Cavalry Brigade (totalling 11,000 men and 32 guns), was concentrating at Abu Roman, one day's march from the Es Sinn position. The Turkish covering position at Sheikh Sa'ad had been captured almost without fighting.

The Turkish position at Es Sinn was a strong one which was difficult to turn on account of water difficulties and lack of land transport.

The position on the right bank of the Tigris extended for about $3\frac{1}{2}$ miles from the river and consisted of a series of redoubts and trenches constructed along the Sinn Banks, which were the ruins of an ancient canal head-works. The ground between General Townshend's camp and the Sinn Banks consisted of about 18 miles of dead flat, featureless and waterless plain, over which the Turkish O. P's. on the Sinn Banks had excellent observation.

On the left bank of the Tigris the Turkish redoubts and trenches filled the gaps between the Horse Shoe, Suwada and Ataba Marshes; while the approach to the position was narrowed down by another very large marsh, the Suwaikiya Marsh. The water in all these marshes is strongly impregnated with Epsom salts and is quite undrinkable for men and animals. The left flank of the Turkish position was some 6 miles from the Tigris, so a slow and methodical advance round that flank was out of the question, owing to lack of drinking water. A mobile water convoy could not be formed as General Townshend's 2nd Line Transport consisted of river craft, and even his 1st Line Transport was short of 300 mules,

The Turkish position was well-dug in depth, well-wired and protected by land-mines and pits containing sharp stakes ; while the river was mined and blocked by a heavy boom.

So the problem General Townshend had to solve was even more difficult than his problem at Qurna.

✓ (c) *General Townshend's Plan of Attack.*—Surprise and deception were the main features of General Townshend's plan of attack.

The Turkish troops on the right bank of the Tigris were to be deceived into staying there ; and the force between the Suwada Marsh and the river masked by a frontal holding attack ; while General Townshend intended to put in his maximum possible strength between the Suwada and Ataba Marshes, and roll up the Turkish position from there.

✓ In order to carry out this plan General Townshend divided his force into columns 'A' and 'B.' Column 'A' consisted of the 16th and 17th Infantry Brigades, the 30th Infantry Brigade (less $2\frac{1}{2}$ battalions) and a composite Cavalry Regiment. This column (less 30th Infantry Brigade) was to carry out the main turning attack.

✓ Column 'B' consisted of the 18th Infantry Brigade and was to carry out the holding attack South of the Suwada Marsh.

The 30th Infantry Brigade (less $2\frac{1}{2}$ battalions) was to protect General Townshend's camp on the right bank of the Tigris and demonstrate against the Turkish position on the Sinn Banks.

✓ The essence of General Townshend's plan depended, however, upon the misleading effect upon the enemy of his action on the 26th and 27th September, the two days previous to the main battle.

(d) *Events of 26th September.*—During 26th September Column 'A' advanced up the right bank of the Tigris to the Chahela Mounds where they camped, covered by an advanced position which was dug in.

Column 'B' disembarked at Nukhilat on the left bank. One battalion established Clery's Post at the extreme Eastern point of the Suwada Marsh, to guard the defile between the Suwada and Suwaiqiya Marshes ; and the rest of the column dug in their artillery 5,000 yards from the Turkish position.

Meanwhile, the bridge at Abu Roman was dismantled and re-erected at Nukhailat at a previously reconnoitred position out of sight of the enemy and out of range of their shrapnel.

(e) *Events of 27th September.*—The next day Column 'A' moved about conspicuously and dug trenches two miles upstream of the Chahela Mounds, making as much display as possible and throwing earth about to make the Turks think that an extensive position was being dug there. But at dusk Column 'A' returned and crossed to the left bank of the Tigris leaving only the 30th Infantry Brigade (less 2½ battalions) in their advanced position on the right bank.

Column 'A' then made a night march to Clery's Post, which they reached at midnight.

Meanwhile, Column 'B' advanced on the left bank under artillery support and occupied and entrenched a position 3,500 yards from the enemy's position and roughly level with the 30th Infantry Brigade on the right bank.

(f) *Battle of Kut-al-Amara (28th September 1915).*—The details of the battle are somewhat complicated, so I shall follow the fortunes of Column 'A,' the composite Cavalry Regiment and Column 'B' each in turn.

(i) Column 'A' and the composite 7th/16th Cavalry Regiment continued their night march from Clery's Post at 02-00 hours and by 05-00 hours had reached their correct position of deployment about two miles north-east of Northern Redoubt, on the extreme left of the enemy's position.

Here General Delamain split Column 'A' into an assault force under Brigadier-General Hoghton (consisting of the 17th Infantry Brigade, 2 battalions 16th Infantry Brigade, and one Field Battery), and a General Reserve under his own command.

His plan was for the assault force to capture Northern Redoubt by 09-00 hours, and then roll up the enemy's position to the Tigris; while he followed with his reserve. The cavalry and two armoured cars were to protect General Hoghton's outer flank.

The leading of the night march as far as the position of deployment had been excellent, in spite of the fact that the R. E. officer leading the march had not been allowed to make a previous detailed reconnaissance in case the enemy became suspicious. There

were no land-marks upon which he could take bearings, so it had been arranged that an aeroplane would fly over the enemy's position the previous day and dip when it was vertically over Northern Redoubt. The R. E. officer took the bearing of the aeroplane at the moment it dipped, and worked out his very excellent calculations from that and from the very indifferent sketch map issued to the troops.

But General Hoghton's force lost direction badly in the wheel round at the position of deployment. When the sun rose at 06-00 hours General Hoghton found marsh on his left and had moved some distance more before he realized that he was moving northwards along the eastern edge of the Ataba Marsh. When General Delamain saw this from the position of deployment he sent a message to General Hoghton to about turn; but by the time that message reached him General Hoghton was so near the northern edge of the Ataba Marsh that he thought it quicker to continue round it and then swing south along the rear of the enemy's position. Surprise was already gone, as our cavalry had encountered and been fired at by an advanced line of enemy skirmishers.

By 07-00 hours the cavalry and General Hoghton's force had reached the northern edge of the Ataba Marsh. The cavalry then continued westwards, while General Hoghton "circumnavigated" the march and then moved southwards.

General Delamain then had to decide whether he would attack Northern Redoubt with the $1\frac{1}{2}$ battalions of his Reserve or whether he would wait for General Hoghton's attack round the marsh, thus falling behind programme. He had by then lost touch altogether with General Hoghton as the available telephone cable was not sufficient for the detour round the marsh.

✓ General Delamain decided to attack at once, but by this time the mirage and a dust-storm prevented his artillery from supporting him adequately, and it was not until 10-00 hours, after General Hoghton's attack had also made itself felt, that Northern Redoubt was taken with heavy loss to ourselves. General Hoghton's advance had been delayed by the necessity of capturing a previously-unreported redoubt at point X on sketch map, No. 4. Northern Redoubt had been held by Anatolian Turks who had fought with great determination.

After Northern Redoubt was taken, Generals Delamain and Hoghton met for a conference, and the latter detached two battalions of the 16th Brigade to General Delamain's force. This enabled General Delamain to fight his way to the Suwada Marsh, while General Hoghton advanced further west, capturing the rearward enemy trenches and beating off a strong counter-attack. But the co-operation of these two forces could not be properly co-ordinated for lack of telephone cable. Visual signalling was entirely useless because of the mirage and dust-storm. Also, why did General Hoghton detach two battalions of his own Brigade (the 16th), to General Delamain instead of returning to him the 2 battalions of General Delamain's own Brigade (the 17th)? This is yet another example of the strange tendency throughout this campaign to break normal organization.]

By 16-00 hours Generals Delamain and Hoghton had again united by the Horse Shoe Lake after capturing the whole enemy position, north of there, and defeating the enemy Reserve from the right bank which crossed the bridge of boats and counter-attacked about 14-15 hours. But after that Column 'A' was completely exhausted from thirst and fatigue. The heat was intense and the men had been marching and fighting hard, without water, since 22-30 hours the night before. They were only two miles from the Tigris, but they did not know in which direction to go in the dark to look for water, and so spent another waterless night.

Throughout this fighting the cavalry behaved stout-heartedly and almost reached the bridge of boats; but they did no real good, as they were "out in the blue" by themselves and were of no real assistance to General Hoghton.

Meanwhile, as soon as Column 'B' heard the heavy firing of General Delamain's attack at 08-00 hours, they fought their way forward to within 600 yards of the enemy's trenches south of the Suwada Marsh. They then lay there until dark, suffering heavily from the enemy's fire, waiting for the order to assault. This order never came. General Townshend at his battle O. P. at Nukhailat was entirely out of touch with General Delamain all day and knew nothing about the situation there. There were two pack wireless sets with the force, but one was set up at General Townshend's headquarters and the other in General Nixon's

ship. The latter had come forward in order to give a rapid decision on policy—presumably the advance to Baghdad—as soon as the battle was over. Had one of these W/T sets been given to General Delamain instead of to G.H.Q., General Townshend would have had the necessary information to enable him to order Column 'B' to assault as soon as General Delamain's force had reached the Horse Shoe Marsh behind the enemy. That portion of the enemy's force would then certainly have been destroyed. As it was, Column 'B' committed the old mistake of not keeping patrols out all night to keep touch with the enemy, so the latter slipped away during the night, past General Delamain's force, taking their guns and transport with them.

✓ On the right bank the Turks made some feeble attacks on the 30th Infantry Brigade at Chahela Mounds, but these were easily repulsed.

(g) *Occupation of Kut-al-Amara (29th September 1915).*

The next morning aeroplane reconnaissance reported that the whole Turkish position was evacuated. General Townshend tried to organize an immediate pursuit in ships, as he had done at Qurna; but the river was so low by September that the ships kept sticking in the mud; so General Townshend halted his force at Kut-al-Amara and the bulk of the Turks got away unmolested and fit to fight us again at Ctesiphon the next month.

(h) *Lessons of the Battle of Kut-al-Amara.*—I have only time to discuss the main lessons of this interesting battle; but there are many more which you can "dig out" for yourselves.

(i) *Surprise and deception should be combined with simplicity.*—

General Townshend admirably carried out Stonewall Jackson's principle of "mystifying and misleading" the enemy; but he imposed a terrible strain on his infantry by keeping them under arms in that great heat for so many hours without water. Only the very best infantry could have stood the strain. Would not a simpler plan have met the case equally well and at far less risk of a break-down?

(ii) *Control by Commanders.*—This is an interesting point. The Army Commander spent the day in General Townshend's O. P., but he did not command or interfere in any way with General Townshend's conduct of the battle.

General Townshend entrusted 2/3rds of his infantry, $\frac{3}{4}$ ths of his mobile artillery and all his cavalry to General Delamain, without giving him an adequate staff to help him, or the necessary W/T set or Signals to enable him to keep touch with Divisional Headquarters. The result was that General Townshend completely lost touch with the battle and was quite unable to influence it.

General Delamain in his turn entrusted practically all his force to General Hoghton and so was himself unable to command Column 'A' effectively.

Mutual trust between a commander and his subordinates is of course very desirable, but the commander becomes a mere figure-head "during the fog of battle" unless he keeps *real* control and an adequate reserve in his own hands. Here again a simpler plan involving less dispersion would have made command and control infinitely easier all round.

(iii) *Information in battle.*—This battle is an excellent example of the ever-present difficulty of obtaining accurate and timely information about the foremost troops in battle. Aeroplanes are useful, but not in themselves sufficient, particularly in a featureless and dusty country like Mesopotamia. General Townshend had detailed aircraft for this purpose, but without any useful results. V/T was useless because of mirage and dust, and L/T is not sufficient to go everywhere; while cables are always liable to be cut by shell fire or the wheels of our own guns and transport. So we come back to the well-recognized necessity for W/T and R/T in battle as the only really satisfactory methods of keeping touch with the foremost infantry.

(iv) *Cavalry co-operation in battle.*—Both sides sent their cavalry "out into the blue," where they were too weak to do any good by themselves, and where they could not influence the main battle. This is *not* co-operation.

I have given you an outline of the movements of our own cavalry. The Turkish cavalry were even less effective. They had a whole Cavalry Brigade which might have caused our column 'A' the greatest inconvenience; but the Turkish Force Commander sent his whole Cavalry Brigade on a raid against General Townshend's L. of C. They did a certain amount of damage to our shipping, but were absent from the decisive battle.

(v) *Use of compass bearings.*—When General Hoghton first commenced to march round the Ataba Marsh his compass must have told him that something was badly wrong, as he was going north instead of south-west. Our manuals tell us always to give compass bearings in our attack orders; but that is often difficult to do. In this case the original mistake occurred in the dark, when a compass could not be read without showing a light, with the consequent danger of giving the whole show away to the enemy. It is easy to criticise General Hoghton now; but I know from personal experience of fighting in Mesopotamia how impossible it is to take useful compass bearings in a featureless, very dusty country and in a strong mirage where even in broad daylight one can only see clearly for a few hundred yards, and where objectives are usually quite invisible until one reaches them.

This difficulty merits careful thought.

(vi) *Do not break organization.*—Here again is a further example of the dangers of breaking normal organization. If detachments are unavoidable, make them as far as possible from complete formations under their own commanders; and give detachment commanders adequate staffs and signal communications, otherwise break-downs are almost certain.

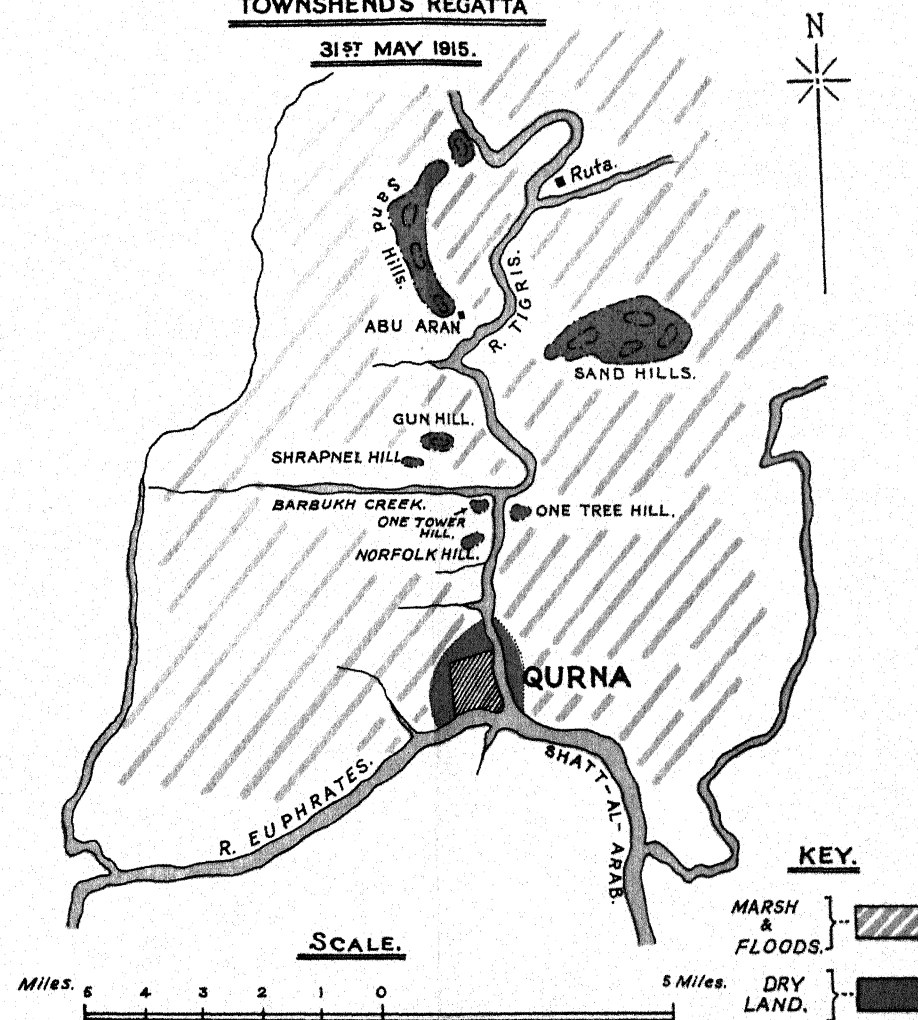
21. *Conclusion.*

This finishes the period covered by this lecture and also finishes the period of our original spectacular successes in Mesopotamia. [We leave the 6th Division at Kut-al-Amara, with their L. of C. already strained to the limit, preparing for a further advance to Baghdad in spite of General Townshend's protests. General Townshend's daily maintenance requirements were 208 tons, while the available river transport could only lift 150 tons a day; but still General Nixon appeared to be entirely confident about stretching our L. of C. a further 200 miles from Kut-al-Amara to Baghdad. However, it is very easy to be wise after the event. General Nixon believed that he had the Turks well on the run; and his pursuit to Baghdad must have seemed to him to be even a safer proposition than General Townshend's brilliantly successful pursuit at Amara after his 'Regatta' at Qurna.]

SKETCH MAP No. 3.

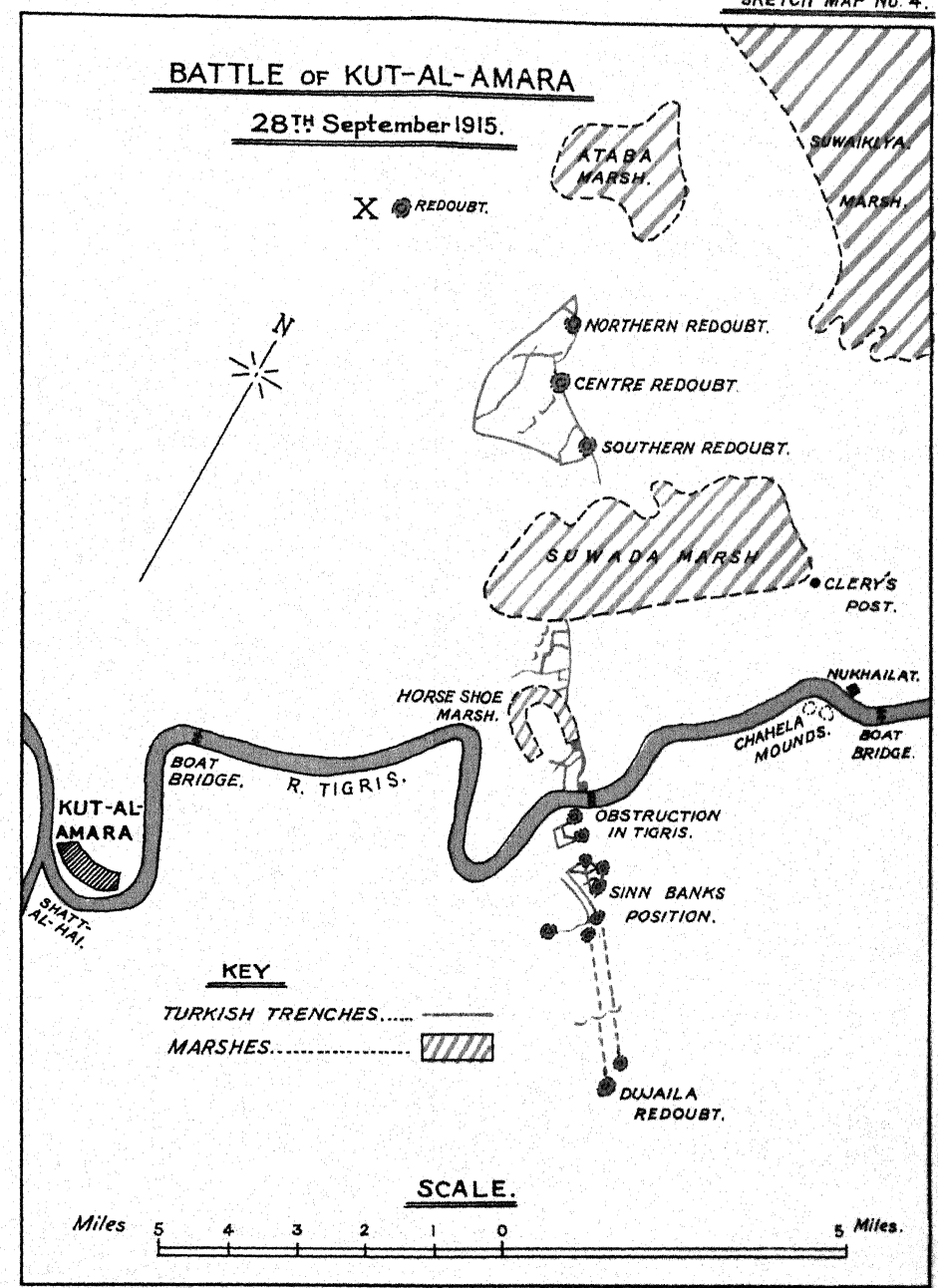
"TOWNSHEND'S REGATTA"

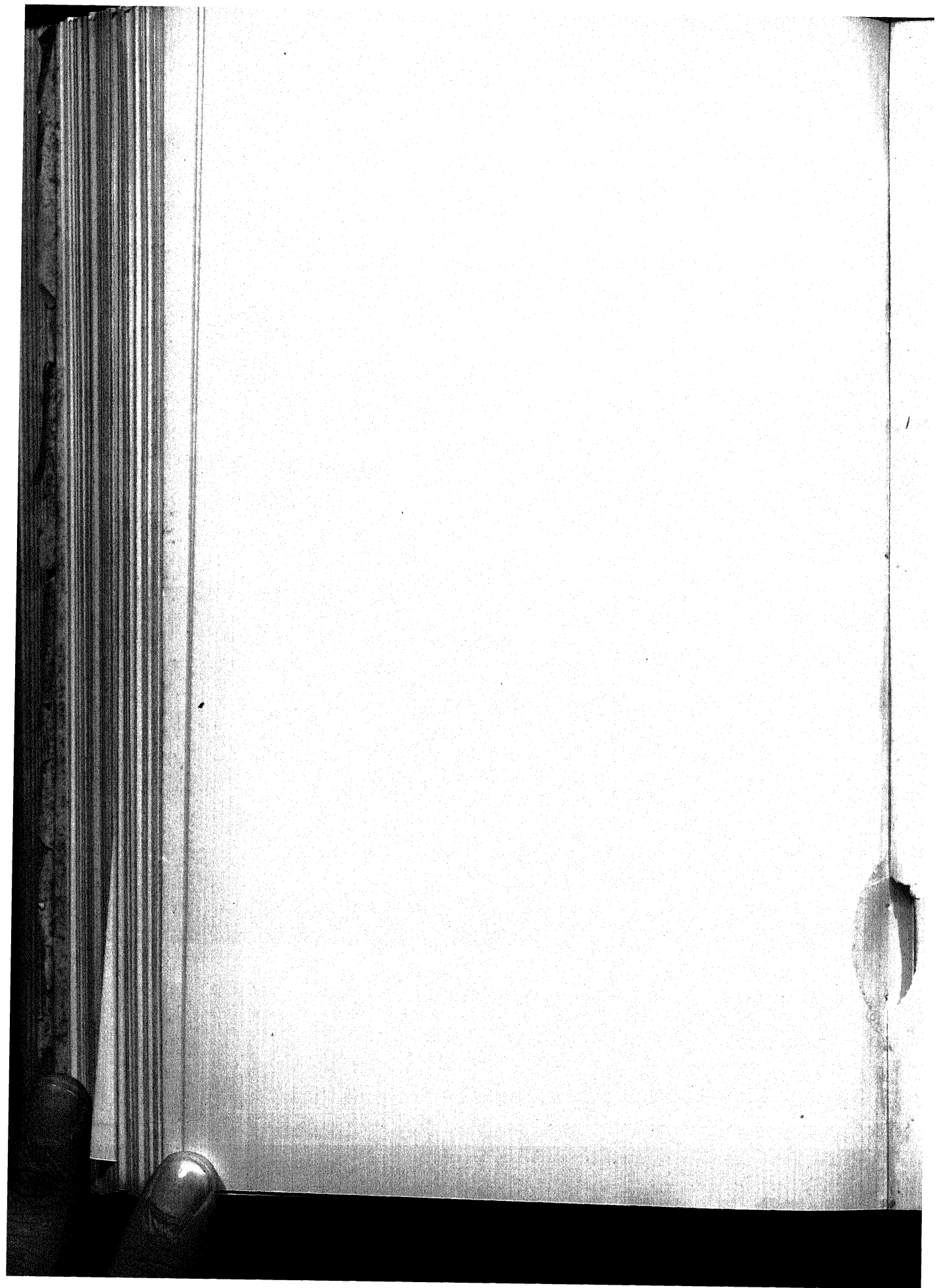
31ST MAY 1915.



BATTLE OF KUT-AL-AMARA

28TH September 1915.





LALLY.

THE CAREER OF AN IRISH SOLDIER.

BY MAJOR B. R. MULLALLY.

The career of Sir Thomas Arthur Lally, Comte de Lally and Baron Tollendal, usually known as Lally of Tollendal, presents many points of interest to the student of character as well as to the historian, for it is a career full of colour and incident and was closely connected with some of the most stirring events in European and Anglo-Indian history.

Born at Romans, in Dauphine, in January 1702, Thomas Arthur Lally was the son of Sir Gerard O'Lally; a very distinguished Irish soldier descended from a race of Irish chieftains, the Lallys (or Mullallys) of Tullindally in Co. Galway, who, remaining true to the religion and the cause of the House of Stuart, had, after the events of 1690 and 1691, taken advantage of the clause in the capitulation of Limerick which allowed the garrison to march out with all the honours of war, and, with some twelve thousand of his countrymen, had taken service under the King of France.

Amongst the lessons which the young Lally learned from his father, who was indefatigable in the military education of his son, was a bitter and implacable hatred of England, or rather the House of Hanover, which occupied the throne which he believed belonged by Divine Right to the Stuarts. This hatred remained with Lally throughout his life and influenced most of the important events in his career, for he never wearied in his efforts to encompass the downfall of those whom he regarded as the enemies of his King and his religion.

He was literally born in the ranks, for, in accordance with the custom then prevailing in the French Army, he was enrolled at birth in his father's regiment as a private soldier and, from a very tender age, he used to spend his holidays with his father in the French camp and was actually in action, at the age of nine, at the siege and capture of Gerona in Spain, while three years later he mounted his first guard in the trenches before Barcelona. The instruction imparted by his father, and his own youthful experience, stood him in good stead throughout his military career, and the intellectual side of his nature

was developed through the influence of his mother who, allied as she was to some of the most illustrious families of France, secured him the *entrée* to the highest French society of the day.

Heredity and environment thus worked powerfully together in shaping the boy's character so that, on reaching manhood, he was described as being an experienced soldier of handsome personal appearance possessing the tone and polish of the most cultured circle of the old French aristocracy.

At the age of nineteen he obtained command of a company in his father's regiment and the next twelve years of his life do not appear to have been in any way eventful, but his chance came when war broke out again and his regiment took part in the operations against the fortresses of Kehl and Phillipsburg. In these actions he greatly distinguished himself by his soldierly qualities and his personal bravery and considerably enhanced his already great reputation as a coming soldier.

The peace of 1735 brought a cessation of hostilities, but Lally was not the man to be content with a humdrum existence, and set about the attempt to bring nearer to fulfilment the aim which had been placed before him by his father. With this object in view, he journeyed to England and sounded the sentiments of the Jacobite supporters in the Southern counties. His experiences convinced him that no insurrection in England could hope to be successful without the support of foreign intervention. France was not then prepared to engage in war with England, so he turned his attention to Russia, and obtained leave to serve with the Russian army commanded by his uncle, the Count Lascy, which was then engaged with Turkey, his real object being to attempt to interest the Czarina, Anne of Courland, in his dreams of a combination against England.

At the last moment, however, his mission was given an official character by Cardinal Fleury, the French Minister, who, aware of his sympathies, ordered him to St. Petersburg and charged him to use his best endeavours to bring about a coalition of France and the Northern Powers against England.

Lally found great favour at the Russian court and with the Czarina, and his charm and address bid fair to help materially in the accomplishment of his mission, but the Cardinal, now afraid of the possible consequences, determined that the negotiations should go no

further and left Lally without support or instructions. Feeling himself compromised he therefore returned to France and reproached the Minister with the words 'I entered Russia like a lion, and thanks to you, I consider myself fortunate to have quitted it like a fox.' The experience, however, was not without its value, for it had the effect of establishing Lally's reputation for being something more than a mere soldier and he came to be regarded as one of the rising figures at the French Court both as a soldier and a diplomat.

His star was definitely in the ascendant and opportunity alone seemed lacking to carry him to the highest positions in the service of his adopted country. This opportunity was not long in coming. In 1740, when Lally was thirty-nine, the death of the Emperor Charles IV threw Europe into turmoil and France and Austria found themselves once more at war. On the outbreak of war, Lally's regiment was sent into Flanders in the French Army under the command of the Duc de Noailles and the Marshal was so impressed with his capability that he made him his Adjutant-General, in which capacity he served in the famous march into Germany which checked, and finally turned into a retreat, the advance of the combined English and Hanoverian army under George II, which had advanced through the Netherlands to the banks of the River Main.

Then followed the battle of Dettingen, which, through the incapacity of the Duc de Grammont and the dogged resistance of the English infantry, turned what appeared to be the almost certain destruction of the Allied army and the capture of George II into a reverse for the French forces.

So ably did Lally acquit himself in the battle and in the subsequent operations when the French Army was commanded by Louis XV in person, with the great Marshal Saxe and the Duc de Noailles as his Marshals, and so favourable was the impression which he created, that he was commissioned to raise a new regiment of Irish, which was to bear his name and which he was to command. The famous Regiment de Lally thus came into being, and its founder's energy and skill were such that in the short space of four months it was said to have reached a high state of discipline and efficiency, and was allotted to the most important position in the trenches before Tournay, which was being besieged by a French army under Marshal Saxe, who had established the superiority of the French army by his defeat of the Duke of Cumberland.

After Tournay, the Regiment de Lally formed part of the field army which opposed the advance of the combined English, Hanoverian and Dutch force which was despatched to the relief of the city, and played a great part in the famous battle of Fontenoy which ensued.

On the 31st May 1745 the Duke of Cumberland, commanding the allied army, established contact with the French army under Marshal Saxe in occupation of a strong position covered by a line of redoubts and fortified villages with but a single gap near the small village of Fontenoy.

Into this narrow defile the English infantry, in close formation, thrust themselves with dogged determination in the face of a terrible fire.

So fierce and resolute was the attack of the English troops that it pierced the very centre of the French position and at one time the capture of the French king himself was threatened. At the moment of victory, however, the English troops, uncovered by their allies, met the full force of the French counter-attack, and were finally compelled to carry out a slow and orderly retreat. The battle was one in which there was honour and glory enough for all concerned ;—glory for that magnificent body of English infantry which, by its tremendous attack, all but gained the day ; glory for the chivalry of France, which, in a quixotic gesture of romantic courtesy, refused to fire the first shot, and then, after its leading ranks had fallen, made charge after charge against that solid wall which would not be broken ; glory to the King of France, who, when the day seemed lost, refused all the entreaties of his staff to leave the field, and to Marshal Saxe who, although carried on a litter, directed his troops with unwavering confidence in the final victory ; and, finally, glory to that great Irish Brigade, the backbone of which was the Regiment de Lally, which was ever in the forefront of the battle and whose last charge decided the day.

Lally's own share in the victory confirmed, if any confirmation were needed, to establish his reputation as a soldier of the first rank, and he was made Colonel on the field and received the personal praise and thanks of Marshal Saxe for the valour and skill with which he had led his Irishmen on that memorable day. The Battle of Fontenoy decided that campaign, and almost the whole of the Netherlands fell into the hands of the French.

With the cessation of hostilities, the ever-restless Lally turned his energies to the opportunity which now presented itself of once again aiding the cause of the Stuarts and furthering the intense hatred of the House of Hanover which he had inherited from his father.

The successes of the French on the continent had revived the hopes of the Jacobites, and Prince Charles Edward was promised a French force of ten thousand men under the Duc de Richelieu, the organisation of which had been mainly due to the vigour and energy with which the Jacobite cause had been urged by Lally upon the French court. He himself was nominated Quartermaster-General. In the meantime, Charles Edward had made his landing in the Hebrides with a small band of adherents and the '45 of tragic memory had started upon its disastrous course.

Ever eager for action, Lally himself set out to join the Prince as soon as the orders for the organisation of the French force had been given and, with a few friends, joined him during his retreat from Derby.

He was at once made an *Aide-de-Camp* to Charles Edward and served in that capacity at the battle of Falkirk. After that battle, he was sent to the south of England in an endeavour to encourage a rising amongst the Jacobite adherents. In a sense, his impetuous departure to England was unfortunate, for he had been the moving spirit of the expedition which was being organised in France. Voltaire, who knew him personally, speaks thus of him at that period: "He was the soul of the enterprise. I have never seen a man more zealous. It needed only that success should be possible for him to succeed." Success was not possible. With Lally's departure the first enthusiasm rapidly dwindled; with the soul absent the body languished, and the expedition never left the shores of France.

The Battle of Culloden blasted for ever the hopes of the House of Stuart, and Lally's presence in England placed him in a position of great danger when the object of his mission was discovered. A price was put upon his head and he was forced to go into hiding. It appears, however, that he possessed some considerable influence even at the English court, and was able to elude his pursuers and eventually cross the Channel in safety.

He immediately rejoined the French Army and we find him in command of his own regiment once more in the operations in Flanders

in 1746 and at the Battle of Laffeldt in the following year. At Laffeldt the Irish Brigade again bore the brunt of the fighting and suffered severe losses, including the death of its famous leader, Lally's great-uncle, Count Dillon.

Incidentally, it was on this occasion that Louis XV coined his oft-quoted and, at this moment of writing, nearly two hundred later, singularly apt mot: "The English fight for all and pay for all."

Lally's next important action was the siege of Bergen-op-Zoom, the assault and capture of which caused consternation in England and Holland. He here had the misfortune to be made a prisoner of war but was soon exchanged and, rejoining his command, was present with Saxe, before Maestricht during the siege of which place he was severely wounded, and had not recovered when the Treaty of Aix la Chapelle restored peace to Europe. For his services during this campaign he was promoted Major-General.

The peace in Europe brought the first part of Lally's career to a close and fate was now to hand him a bitter cup from which he was destined to drink the dregs of failure, disgrace, and an ignominious death. His Indian career was in sharp contrast with the striking success which he had achieved in Europe and the tragedy of it was none the less poignant because he largely brought it upon himself.

We have seen how he made his way to high rank in the French army by his gallantry, efficiency and energy; how his engaging personality impressed all with whom he came into contact, and how he imposed his will upon his men and won their confidence and devotion. His knowledge of Europe and of European personalities, methods of warfare, and politics, was extensive, and his connections with the most influential families of France well established, so that, after Maestricht, he was generally regarded as the rising genius of France and the soldier upon whom the mantle of Saxe would fall in the next war.

It was believed that knowledge and experience of affairs in Europe, such as he had acquired, would be all-sufficing in any part of the world, but the melancholy story of his misfortunes in India shows how little his training in the diplomacy and warfare of the West availed Lally in his contact with the East and its methods.

II.

The Peace of Aix la Chapelle proved to be only a lull in the struggle between England and France and the war was widening far beyond the confines of Europe.

France was already pushing forward in America, and French adventurers were coming into collision with English merchants in India, where it soon became apparent that the rivalries of the two nations would force a conflict.

The French settlement at Pondicherry, established in 1674, had, in the course of a few years, attained to a state of considerable prosperity and importance, and the French also had the factories at Mahé on the Malabar coast at Karikal on the Coromandel coast, and at Chandernagore in Bengal.

When war broke out between England and France in 1744, Labourdonnais, who was then Governor of the French colony of Mauritius, conceived the plan of delivering a counter-stroke against the English in India, and, fitting out a fleet, sailed for Pondicherry. Dupleix, who was then Governor of Pondicherry, received Labourdonnais with little enthusiasm, and it does not appear that the dream of a French empire in India, which was soon to become the ruling passion of his life, had, at this stage, taken shape in Dupleix's brain.

Undeterred by his colleague's failure to support him, Labourdonnais sailed for Madras, and, after repulsing an English fleet *en route*, hoisted the flag of France over Fort St. George four days after anchoring in the roads.

His orders from the French East India Company had forbidden Labourdonnais to dream of conquest and he therefore undertook to restore Madras on the payment of a modest ransom. The capture of the place, however, had fired the imagination of Dupleix who now determined to strive for French dominion in India, and, as a first step, refused to hand back Madras. Labourdonnais was compelled to return to Mauritius and Dupleix now boldly showed his hand.

Space does not permit of more than a very brief outline of the methods which Dupleix employed to gain his end, but some mention of them is vital to this study, for, had Lally possessed the flexibility of mind to enable him to combine Dupleix's subtlety with his own military genius, success instead of failure might have crowned his

career in India and the whole course of English and Indian history might have been profoundly different.

The main principle upon which Dupleix based his system was to make himself and the French so necessary to the Native rulers that they would be prepared to go to great lengths in the matter of concessions of territory and spheres of influence in order to gain and keep their places, that he himself would, by his intrigues, gain such an ascendancy over the several individual rulers as to be in a position to play one off against another; and that he would thus, by diplomacy rather than force, pave the way for French domination of India. With this principle in his mind, Dupleix set himself to the first task of consolidating his position with the native rulers of the South of India, regarding the expulsion of the English as secondary to, and the logical consequence of, his policy. By 1752 his work showed great results. He had established the positions of the Subadar of the Deccan and the Nawab of the Carnatic, who owed their ascendancy to him and the French; the limits of French possessions had expanded enormously, while the English had little beyond Madras and Fort St. David, and the fall of Trichinopoly, which was being defended by their candidate for the Nawabship of the Carnatic, appeared imminent.

But Dupleix was no soldier and his plan failed for just that reason, destroyed by Clive, who, by his military genius, turned the tide and won India for us.

Although starved of men and money, Dupleix maintained the unequal struggle for two more years, until, in 1754, he was recalled to France and a nominal peace ensued in India. In reality, hostilities continued with scarcely unabated vigour and with varying success, so that, when war broke out again in Europe in 1756, it seemed that the supremacy in India would be gained by the power which should first have a well-equipped force, supported by an adequate fleet, on the scene of action.

Some such conviction appears to have inspired Lally, who was by now high in the counsels of the French government and whose advice was asked as to the course of action to be pursued against England. He recommended three alternative schemes, any of which, he maintained, might be followed with advantage.

Firstly, the project nearest his heart, of active military and naval support of another Jacobite descent upon England; secondly, to drive

the English out of America; and thirdly, to send a sufficient force to secure India for France. He added, "Whatever course you pursue, it is primarily necessary that you should think and act at the same time"—sound advice which, if acted upon, would probably have profoundly affected the course of history. The French government, however, mistook timidity for wisdom, and it was only in 1756 that war was formally declared and it was decided to act against England simultaneously in Canada and India.

As soon as it was known that it had been decided to send an expedition to India the French East India Company pressed for the appointment of Lally as its commander. His great reputation, both as a soldier and a diplomat, his energy and force of character, and his universal popularity seemed to point him out as the best man for the task, while it was urged that his unsullied honour would be proof against the corruption and dishonesty which were rampant in the French administration in India, and that his stern character and reputation for being a man who demanded and exacted implicit obedience of his orders would secure the cleansing of the administration.

The Minister, with shrewd judgment of Lally's character, opposed the appointment, although he liked him personally, fearing, and subsequent events proved how well-grounded his fears were, that his eager and passionate nature would make him unreasonably fierce and uncompromising when faced with the intangible and passive resistance of the corrupt officials in India who would naturally resent the cleansing process.

However, he eventually gave way, and, on the 19th November 1756, Lally was appointed Lieutenant-General and Commander-in-Chief of the French forces in India, with the title of Commander-in-Chief and Commissary of The King for The French Possessions in the East, including the Isles of France, Bourbon and Madagascar.

The expedition under Lally's command was to proceed in three detachments, of which the first, consisting of 1,000 men under the Chevalier de Soupire, with twenty siege guns, left France in December 1756 and arrived at Pondicherry in the following September. The second detachment, mainly consisting of the Regiment de Lally, was to proceed in February of the next year, escorted by a squadron under the command of Rear-Admiral Count d'Aché.

In d'Aché Lally met his evil genius. Nevertheless, unable to make a decision, and timid to a degree, d'Aché hampered Lally at every turn and finally deserted him at a critical moment. Thanks to the Admiral's vacillation, obstacle after obstacle was placed in Lally's way, and it was not until the 2nd May 1757 that the convoy, after one false start, finally set sail for the East. The third detachment was to sail six months later. It never left the shores of France and the reinforcement upon which Lally had reckoned never reached him.

The voyage itself must have well-nigh maddened the energetic soldier, for d'Aché seized every pretext which his timid imagination could invent for avoiding any possible chance of meeting English ships, and sailed an extraordinary course which prolonged the voyage beyond all reason, so that he took nearly twelve months to reach India. Had the convoy sailed with reasonable speed, it would have reached the East five or six months before the English fleet which was despatched; as it was, the two fleets arrived within a few days of each other.

In the meantime, the force under de Soupire, having arrived at Pondicherry, came under the orders of the Civil Governor, de Leyrit. This man, who was afterwards to be intimately connected with Lally, had been described to him as "fit for trade, but weak, phlegmatic and silent; one who suffered others to get the start of him, and who did not know how to maintain proper subordination." It is, perhaps, not surprising that a man of this character, in his position as the senior official, prevented de Soupire from carrying out perfectly practicable operations against the English, and let slip a golden opportunity of capturing Fort St. David, which was practically undefended.

Lally arrived at Pondicherry on the 2nd May 1758 and was greeted with the news of the loss of Mahé and Chandernagore to the English.

He at once acted with his characteristic energy and decision, and, three hours after landing, was on the march to Cuddalore with a force of 800 men. The place fell on the third day and he then marched for Fort St. David, which, although greatly strengthened and with a reinforced garrison, fell to him after a siege of seventeen days. He then sent a detachment to occupy Devi-Cottah, which was abandoned

on the approach of the French troops, and returned in triumph to Pondicherry on June 10th.

It might almost be said that his arrival in India and his first successes, within a few weeks of that arrival, had electrified the French, and they certainly appeared to justify his appointment, but his utter lack of comprehension of, and sympathy with, Indian customs and prejudices were soon to alter the whole scene and make him an object of hatred and execration. Accustomed as he was to European habits of mind, as they then were, with regard to Eastern races, he was astonished to find that the natives resented being regarded as slaves and inferior beings unworthy of the least consideration for their social and religious customs. The institution of caste, especially, appeared to him merely as an ingenious method of avoiding toilsome labour, and he set himself to reverse the policy of Dupleix, who had always been careful to respect native prejudices and conciliate the inhabitants whenever possible. Confident in his own strength, he went far too directly to his purpose of driving the English out of India, ignoring, as unworthy of consideration, except as beasts of burden, and, in the case of the French sepoys, as cannon-fodder, the teeming millions of the inhabitants.

Caste was trampled under foot. Brahmins were yoked with Pariahs and Sudras to carry loads which their caste forbade them to touch and the result was a general panic in Pondicherry. Not content with thus completely alienating native sympathies, Lally met the remonstrances of his colleagues with insult and derision and refused to listen to the advice of men whose Indian experience should have guided him.

The consequences were fatal. When he returned from Fort St. David he returned to a city seething with discontent, which soon turned to savage hatred on the part of the natives and bitter resentment and a deep sense of injury on the part of his French subordinates.

It had been Lally's intention, after the capture of Fort St. David, to march upon Madras, but he found that he had neither the money nor the transport necessary for such an undertaking, and that he had lost the confidence of the natives and was at bitter feud with his Council.

At his wits' ends, he determined to claim the payment of a bond due from the Rajah of Tanjore, and, when he met with the refusal

of his demands, he decided to attack Tanjore. The consequences of Lally's policy were now felt in all their completeness, and he experienced the full weight of the passive resistance which the East alone knows how to oppose to those who run counter to its age-old institutions, and which has defeated even better men than him. He encountered obstacles at every turn. Transport was unobtainable, supplies failed to materialise, labour was not forthcoming, and when the army at length reached Tanjore it was in sorry plight, without food, money, or a sufficiency of ammunition.

The city put up an unexpectedly stout resistance and Lally put the final touch to his folly by plundering an outlying temple, and, furious at being thwarted by a mere native, swore that unless the place was at once surrendered he would send the Rajah and his family as slaves to Mauritius. This only served to strengthen the resistance of Tanjore, and the discontent of his troops, who were near mutiny, and the exhaustion of his inadequate supplies of food and ammunition, forced Lally to retreat.

The retreat nearly ended in disaster. The French camp was attacked and Lally himself, singled out for vengeance, only escaped with his life by something short of a miracle. The enemy were finally repulsed, but the force only reached Pondicherry with difficulty.

On his return, Lally, nothing daunted, determined to push on with his preparations for an attack on Madras, but here d'Aché failed him once more. Having had an indecisive encounter with the English fleet, his nerves failed him, and in spite of the earnest entreaties of Lally, he betook himself with his ships to the Isle de France. Lally, nevertheless, persevered in his plans, and only twenty-five days after his return to Pondicherry moved upon Arcot, which place he entered without opposition on the 4th October 1758.

At Arcot he was joined by General Bussy, who had been one of Dupleix's ablest lieutenants, and had succeeded with a handful of Frenchmen in maintaining French influence at the court of the Subadar of the Deccan from which he had been recalled by Lally. The latter could not understand Bussy's plans of peaceful penetration and treated him with great hauteur, insinuating that his actions at the court of the Subadar had been merely aimed at securing personal aggrandisement. He could not, or would not, see any enemy in India but the English, and scoffed at the system of alliances with the native

princes as the product of the enfeebled brains of men who had been too long in the East and lacked European, and therefore to his mind, the only useful, experience.

But Bussy, whose political acumen as well as his capacity as a soldier had been proved on many occasions, made a very different impression on the unprejudiced minds of many of Lally's subordinates, and six of them specially requested that he should be promoted over their heads, and Lally was forced to accede to the demand.

In entering Arcot Lally committed a serious blunder. Had he marched upon Chingleput instead, he would have not only secured supplies for himself, but would have cut off the English from their main source of supplies, and might quite easily have forced Madras to surrender. As it was he found Arcot without resources, and, before he could retrieve his mistake, the English had thrown a strong garrison into Chingleput. He was compelled, therefore, to return to Pondicherry to seek there the sinews of war.

Money was by now practically unobtainable, thanks to his treatment of the natives, and Lally and his officers were obliged to advance funds from their own resources. The sum raised was only some 90,000 rupees, and with this Lally put his army, consisting of 2,700 Frenchmen, 300 cavalry and 5,000 sepoy in motion.

Marching on Madras, he arrived before the city on the 11th December and the unsuccessful siege which followed revealed with startling clarity the demoralisation which Lally's high-handed policy had produced in the troops under his command. Unpaid and with the shortest rations, the rank and file were surly and dispirited and the officers discontented and suspicious.

Everything that could go wrong did go wrong and Lally was regarded as the cause of every failure and the fount and origin of every privation.

Things came to such a pass that, when a breach was finally made, the troops, in the words of one of Lally's chroniclers, "shewed a disinclination to storm," and this, combined with the appearance of an English fleet with reinforcements, forced Lally to raise the siege and return, furious, to Pondicherry. Worse was to follow. It is sad to have to record that this man, the once brilliant and honoured European soldier, had, by his arrogance and his mistaken policy, incurred such hatred that the news of the failure before Madras was

received in Pondicherry with rejoicing, not only by the natives but by a large proportion of the French officials. He himself did not realise the real cause of the feeling against him, and persisted in attributing it to the corruption and want of patriotism of the French civil officials, declaring in his wrath, when referring to the administration, that "fire from Heaven, in default of the fire of the English, would, sooner or later, inevitably destroy that Sodom!"

The possibility of an English attack upon Pondicherry itself now began to loom large and Lally endeavoured to induce the egregious d'Aché, who had returned with his fleet to that place, to remain. The urgent appeals of Lally and his council were, however, unavailing, and beyond landing a few men, whom the former described as "the scum of the squadron," d'Aché refused to co-operate and sailed away, leaving his colleague once again, and this time, finally, in the lurch.

Further trouble occurred in a mutiny in the army under Bussy, which was sent northwards in an attempt to retrieve the serious reverses which the French had suffered under Bussy's successor, Conflans, and which had resulted in the defection of the Subadar of the Deccan. The mutiny was quelled by payment of arrears of pay and promise of amnesty for all concerned, but the delay proved fatal to the French cause in the North and Lally now determined to stake all on a decisive battle.

Rejecting the advice of Bussy, who was in favour of the employment of the superior force of French cavalry in a threat to the English line of communications, Lally advanced on Wandewash, and, capturing the town, proceeded to attempt to reduce the Fort. His Chief Engineer proved to be so dilatory that considerable delay ensued before a breach was made, and the interval gave time for the English force under Coote to march to the relief. Lally marched out to meet him, and then followed what was destined to be the last battle of his eventful career.

The English had a superiority in numbers, with 1,900 Europeans and 2,100 sepoy against the French 1,350 Europeans and 800 sepoy. Lally, himself behaved, as always, with the greatest personal gallantry, but his sepoy were sullen and broke at the first onset. The Regiment de Lorraine then advanced to the attack and succeeded, in face of stubborn opposition, in breaking the English line, but was immediately attacked in both flanks and driven back. In

a last desperate effort to retrieve his fortunes, Lally now put himself at the head of his cavalry and called upon them to charge.

Scarcely a man would follow him. It is not difficult to imagine the bitterness of that moment for this once-popular and idolised leader whose men had been wont to hang upon his very nod.

The English now pressed home their attack and the French line gave way in a retreat which was only saved from becoming a rout by the firmness of the French cavalry, who, partially recovering from their loss of morale, prevented a general pursuit.

The end was now very near. Retiring step by step, followed by the English, Lally fell back upon Pondicherry and, by the 1st May, the city was practically invested by both land and sea. The nine months that followed tried Lally highly. Apart from the enemy without the wall, he had to contend with hostility, intrigue and treachery from his own people; much of it of his own sowing, it is true, which no doubt made it harder to bear, but much of it was also due to the corruption rampant amongst the officials, who seized every opportunity to embarrass the man they hated for his downright condemnation of their practices. Surrounded by those whom he had made his enemies, he nevertheless still maintained his courage and conducted the siege with such resources as he could muster. Too late, he repented of his attitude towards native alliances and entered into negotiations with Hyder Ali, but without success, the obviously failing French cause now offering little attraction. Ill, harrassed, and assailed by intrigue, he bravely struggled on, but starvation at last beat him to his knees, and he offered to capitulate, after enduring a siege of nearly nine months' duration.

Terms were refused him and he was obliged to surrender unconditionally, on the 16th January 1761.

Describing the siege, an English officer writes as follows:—"Our artillery performed wonders, but the want of every necessary within was what chiefly wrought in our favour. The inhabitants had subsisted for a long time upon their elephants, horses, camels, etc. I can assure you for a truth that a dog sold for Rs. 24; of this miserable provision there did not remain enough for one day longer when the English took possession of the place." And, referring to Lally, he says:—"It is a convincing proof of his abilities, the managing so long and vigorous a defence, in a place where he was held in universal

detestation." It was indeed wonderful that he was able to carry on as long as he did under the circumstances and shows the force of this strange man's character. The feeling against him found expression at his fall, and, as he marched out of the citadel of Pondicherry, he was greeted with a storm of hoots and hisses and was loaded with abuse and opprobrious epithets. His Intendant was set upon and killed and Lally himself only escaped the mob through the intervention of English troopers.

Little more remains to be told, and that little is the saddest of all.

After being detained for two months in Madras, he was sent to England as a prisoner of war, and, on arrival in London learned that his enemies had already been busy in Paris and that he had been charged with treason, incompetency, irregular correspondence with the enemy, peculation, and tyrannical administration. Ever jealous of his honour and careless of his personal safety, he begged to be allowed to return to France on parole, and, the application being eventually granted, he returned to face the accusations against his good name. He found that the dice were heavily loaded against him. Public opinion in France was incensed at the loss of India and demanded a victim. Lally stood alone, friendless as far as the Council of the East India Company and the officials were concerned, and vehemently accusing them and their corruption, extending over a period of years before his arrival in India, as the real cause of the disasters.

He was obviously marked out to be the scapegoat, and disdainfully rejecting the advice of friends to flee the country, he voluntarily gave himself up and was confined in the Bastille. The trial dragged on for over two years and a half and the case for the prosecution was mainly based upon the evidence of a certain Father Lavour, a Jesuit priest, who had been in Pondicherry throughout the events which have been described herein. Amongst the many intriguers in Pondicherry this man was the most despicable and the most dangerous. A plausible sycophant, he spread poison wherever he went, and was in his element in the disputes between Lally and his colleagues. Posing as the friend of both sides, he repeated confidential conversations here, cast innuendoes there, and hit upon an ingenious method by which he hoped to stand well with either side, according as the

situation developed. For this purpose he had carefully kept two sets of journals, in one of which he had praised Lally's administration, and in the other, had condemned it. Death struck down this scoundrel before he was able to make use of his dirty records and search revealed the journals. Unfortunately they were found by Lally's enemies, and the one in which he was condemned was given to the world while the other was suppressed. This decided the Irishman's fate and a brave soldier was condemned, such was the unreasoning animosity of his enemies, upon the testimony of a double-faced slanderer.

He was pronounced "attainted and convicted of having betrayed the interest of the King and of the India Company, of abuse of authority, and exactions against the subjects of the King and the foreign residents of Pondicherry," and was condemned to have his head severed from his body and to be deprived of all titles, honours and dignities, and his property was declared confiscate to the State.

When the sentence was read to him, Lally remained calm until the words "betrayed the interest of the King." Crying, "that is not true, never, never," he seized a pair of compasses lying on the table and stabbed himself over the heart. The wound, although severe, was not fatal, but his execution was advanced six hours in consequence, and he was hurried to the scaffold.

The closing scene was painful in the extreme and the account of it cannot but fill the reader with pity for the victim and horror of the savage cruelty of the times. A pardon was personally begged of the King, in the name of the Army, by the Marshal de Soubise, at the eleventh hour, and was refused. The gallant soldier who had given the best years of his life for France, who had devoted all his boundless energy to her cause, and had fought for her with dashing valour and skill in many a battle, was hurried into a dung-cart, gagged and bound, and suffered a felon's death. Just before the end, the gag was removed, and, turning to his priest, Lally said: "Tell my judges that God has given me grace to pardon them; if I were to see them again I might no longer have the forbearance to do it." He knelt and placed his head upon the block.

Many years later a repentant France legally annulled the monstrous sentence, and restored to Lally's son his father's honours and titles.

Thus ended the career of Thomas Arthur Lally, and its greatest interest for us, who had displaced the French in India, lies in the story of his failure when faced with the unfamiliar task of dealing with an alien civilization and adapting his methods to the mentality of the East.

Energetic, courageous, and a brilliant soldier, he made his way to the top of his profession in Europe, but lacked the elasticity of mind to profit by the experience of men who had spent their lives in the East, and rode roughshod over the most cherished prejudices and institutions of an ancient civilization. His great failing was his intolerance and lack of sympathy for all who were not brought up in the same school as himself, and his pride and lack of the common touch nullified his great qualities and brought him to ruin. Had he been able to add tolerance and sympathy to his undoubted talents and invincible perseverance, he would have won a high place in the temple of Fame and the course of history would probably have been different.

THE WELSH MARCH AND THE N.-W. F. P.

BY MAJOR J. G. O. WHITEHEAD, M.C., R.E.

A Border problem that played a considerable part in early English history, and which resembles to a marked degree the present problem on the North-West Frontier, is contained in the story of the Welsh March. When it is appreciated that a state of active petty hostilities existed for over six hundred years, that the incidents were in the main confined to a belt of country only twenty miles wide, that geographical conditions exerted the same hampering restrictions as they do on the Frontier, and that the racial natures of the antagonists are similar, it will be realised that the story represents a vast deal of experience in border warfare. Much has passed out of record, but what remains is of some practical value; for, although the weapons and *materiel* of that period differ in form from those of to-day, they are in substance the same. Such instances are to be found as an English leader failing to penetrate the Welsh hills with a normally equipped force, and later gaining a striking success with a lightly armed one; and, more than once, a propensity to attempt shock action without preparation by fire (missiles) is seen having to be corrected. Differences in certain governing conditions exist however between the fighting on the Welsh march and that on the Indian border; and so the story does not provide a clear argument for any particular procedure, but only gives experience of results which might possibly apply to the present problem on the North-West Frontier.

A contoured and layered map, such as is in the *Times* Atlas, is needed for appreciating the geography that governed the operations; two-key maps have been added at the end of this article which show the whereabouts of the names referred to and the general outline taken by the systems of defence.

The following is a short account of how the Welsh border line originated. Under the Roman government Britain was inhabited by Celts, who were a comparatively cultured community, with a literature, art and law of their own.* They were a courageous race,† but they

* The law against the admissibility of hearsay evidence was included in it.

† Their prolonged resistance to the Romans so gained the admiration of the civilised world that it became the fashion in Rome for young "bloods" to drive about in chariots, and for women to dye their hair red, because it was "so British you know."

were by nature excessively individualistic and lacked the capacity for prolonged effort in combination ; and it was that characteristic wherein lay their weakness.

During the fifth and sixth centuries various Anglian tribes entered Britain and gradually displaced the Celts, transforming the country from a Celtic Britain to an Anglian England. The strength of the newcomers lay in their sense of communal effort, the will to subordinate individual interests to the common good, the same sense of public spirit which rules national life to-day in the form of *Common Law*, the Parliamentary *Commons*, and the *Common* wealth. The Celts, on the other hand, might combine spasmodically for a common purpose ; but before long lesser interests of family clan or tribe would supervene, and their racial union would disintegrate.

PRE-CONQUEST PERIOD.

As a result, by the year A.D. 600 the Celts had been pushed back into Wales and the north-west, where the various tribes united to form the Cymri, a name still to be seen in Cambria and Cumberland. Chester was the point where contact between the west and north was fragile ; and it soon fell into Anglian hands ; conditions there assumed the form in which they were to remain for centuries, and which on the Welsh border reproduce those of the present Indian Frontier. As in India, the plains (of England) were occupied by an agricultural population, whose chief desire was to derive the most from the land that it could, and which had no great inclination to expand further west ; this population was rich in the means of existence. In the hills were a pastoral people, unable to derive enough from the soil to provide for their needs, and substantially poor. Hence, the hill folk were in a constant state of readiness to raid the plainsmen ; but, except when a leader arose sufficiently strong to combine action over a wide area, the raids were of a local character. Concerted efforts by the Anglian tribes at further expansion westwards ceased near the foot of the Welsh hills, which were generally unsuited to agriculture ; but even then local infiltration continued wherever a valley offered the prospect of gaining more acres to the plough ; and this saddled the English with a name for "acquisitiveness," an attribute that must have gone far to preclude peace on the border. The forebodings of the Welsh were voiced in an incident that has remained on record, when a Welsh recluse at Berriew, near Montgomery, heard one day

the cry of an Englishman hunting; returning to his followers he bid them pack their belongings—"for the kinsmen of yonder strange-tonguedman whose voice I heard across the river, setting on his dogs, will obtain possession of this place, and it will be theirs, and they will hold it in ownership."

From the middle of the VII century Wales was faced by the Anglian kingdom of Mercia, the northern and southern limits of which were at Chester and Gloucester; south of Gloucester lay the West Saxons, who did not become united with Mercia until later. Towards the end of the century Offa, the King, built the dyke that bears his name, as a border barrier from Cheshire to Herefordshire; its course is shown in Map 1. Between the Dee and Wrexham, it, or an earlier one, jutted forward to include the estuary; but otherwise it ran almost due south to Herefordshire; there it swung back and joining with the Wye took the boundary in the direction of Gloucester. The dyke was an earthwork 15' deep, with a bank thrown up on its eastern side; its purpose was to stand in the way of raiding gangs as they withdrew encumbered with cattle, and by denying them an easy line of return to assist counter-action by the local villagers. Defence of such an earthwork was not in the question; for the raiders, as is always the case, had the power to choose their time and place and so outnumber their opponents, or to take advantage of the cover of darkness. Behind the dyke every village and hamlet had its local defence work, manned by the villagers themselves; some of these works were wooden stockades, and some stockaded mounds or *burhs*, whose former existence can be recognised to-day in the "—Stokes," "burys," and "—berrows" of village names. On a raid occurring, the villagers would first take refuge in their bury; and then, as the raiders passed on the men would follow, hanging on their skirts and looking for an opportunity to harry them; eventually they would be joined by other villagers, headed by the Thane with his paid retainers, when they would close with the raiders and force them to abandon their loot. The whole procedure was identical with that of the Frontier Constabulary and village *chigas*. The function of the dyke was to take the place of a natural obstacle, and there is every reason to believe it to have been efficacious; Offa's great work was not the first of its kind, there is an extensive earlier one in Cheshire known as Wat's dyke, and in one river valley in Herefordshire Offa's is the third of a sequence built as the English settlements gradually advanced westwards; moreover

other dykes were dug subsequently. It can therefore be said that for the three centuries preceding the Norman conquest the official protection of Mercia was an active defence by an armed constabulary and villagers *within* an artificial barrier.

From A. D. 800 onwards Mercia had to face another enemy in the west sometimes in alliance with the Welsh, sometimes acting independently—the Danes from Dublin. These raiders had the great advantage of “command of the water”; they were supreme afloat, and were able to penetrate at will up the rivers; so the Severn from the British Channel to Shrewsbury became their highway, and the Dee at Chester, a similar source of peril. In the end, Alfred of Wessex broke their power; and his daughter Aethelflaeda, the Lady of the Mercians, fortified the border against them. Her system of fortification is shown on Map 1; it consisted of a number of burys, each containing a mobile regular garrison of *burhware*, whose duty was to form a military nucleus for the local forces. The Mercians carried only javelins as missiles; so it can be realised that all action took place outside the bury, in the open field, and that the fortifications were purely a defended barracks from which the garrison might act offensively. Runcorn, Eddisbury and Chester were sited against raids along the Mersey and the Dee; Bromsberrow against inroads on Herefordshire from the Wye and Severn; Gloucester was also garrisoned, and Bridgenorth covered the Mercian communications with Herefordshire and Shropshire from Stafford. Chirbury was located to oppose a junction between the Welsh and the Danes operating along the Severn.

The active character of the Mercian defence is to be stressed; their burys and dykes were not designed for passive resistance but to enable a hastily assembled and weak local levy to act effectively. Nor did the English stop at activity within their dyke; they were in the habit of repaying the Welsh in their own coin, and the following story contains a wealth of border history:

Taffy was a Welshman, Taffy was a thief	{	<i>tells of a Welsh cattle raid.</i>
Taffy came to my house to steal a leg of beef.		
I went to Taffy's house; Taffy was in bed;	{	<i>a punitive expedition by night:</i>
I took a marrow bone and broke Taffy's head.		
		<i>successful.</i>

The English though were characteristically heavily armed and slow moving; and it was Harold who taught them a lesson in hill-fighting that is even to-day being re-learned on the Indian Frontier.

His first experience against the Welsh was in 1055, when he gained a success, but found himself unable to follow it up and penetrate the Black Mountains. By nature Harold was a rapid mover (his 180 miles march in four days from the South coast to Yorkshire, in 1066, illustrates this feature); and in his next campaign he first of all made a rapid dash from Gloucester to Rhuddlan in mid-winter, when he would not have been expected to act, and then followed it up in the spring by taking a lightly armed force into North Wales, and scouring the whole country. His success must have been complete, because a full hundred years later it was recorded that 'there was no more heed paid to the Welsh,' and the deeds of his expedition were told of in fabulous terms.

POST-CONQUEST PERIOD.

After the conquest, William's first measures were to surround his new realm of England with a ring of Counties Palatine, semi-independent states on which he could rely to keep his English land free from outside interruption while he consolidated it; Durham and Lancaster secured the north; Chester, Shropshire and Hereford held the Welsh border. This, however, was no more than a temporary measure; and he and his successors took the earliest opportunity to substitute for them a fringe of much smaller feudal baronies along the Welsh march. The underlying motive of the system was to transfer responsibility from the State to private (*i.e.*, local) enterprise, and at the same time to keep a rein on private power; its nearest counterpart in India is the decentralised control that was in vogue when Nicholson and John Jacob were at Bannu and in Scinde. A study of the siting of the castles and their history contains the experience gained during the two hundred years for which the system served; but the motives governing the siting are not always easy to determine, on account of the several interests involved. In some instances the castle was built purely to defend a certain tract of land, in others with the view to provide a stepping off place for the extension of the baronial lands (a private concern of the Marcher lord), and in others as the stepping off place for a national expedition against the Welsh. Map 2 shows the framework of the system of castles that was established; a point of note is that except for South Wales it practically coincided with Offa's line, and that it remained in this form with very little change for two centuries.

The idea of the total annexation of Wales was conceived by William I, who laid the foundation of the plan by which it was finally

accomplished ; but until the reign of Edward I, the difficulty attending the operation and internal dissension in England necessitated a general defensive attitude, although a certain amount of individual offensive enterprise was permitted. It is in the absorption of the whole of Wales that the Welsh border problem differs slightly from that of India, and leads to the western edge of the border baronies shown on Map 2 having to be considered as the line corresponding to the Durand Line. Behind lay an independent *hinterland* ; and the justification of its eventual absorption is a material concern in the political aspect—it rested in the fact that Wales could not support its existence economically, and would not endeavour to do so peaceably, and that it was essentially a part of the single geographic area of Britain, and that there was no insuperable dissimilarity between the racial natures of the two peoples.

The main features of the post-Conquest system were as follows:—The true base for operations lay behind the Dee and the Severn, in the cities of Chester, Worcester and Gloucester ; and the two principal castles held as starting points for national expeditions into Wales were Rhuddlan and Brecon. The route Chester—Rhuddlan was secure on the northern seaboard ; its southern flank was protected by the occupation of the valley of the Alyn. The southern side of the route to Brecon was safeguarded by the occupation of the valley of the Usk ; and the north side was protected by occupation of the district of Elfael, which was controlled by a circular route running from New Radnor through Builth to Brecon. Between Rhuddlan and Brecon lay a line of defensive castles. Wrexham stood at the foot of the Clwydian hills, Chirk and Oswestry at the foot of the Berwyn, Careeghoha guarded the exits of the valleys of the Tanat and Vyrnwy, thence the Severn formed an approximate boundary, with Caus Castle and Montgomery behind it. Clun Castle controlled the valley of the Clun, and Knighton the valley of the Teme ; both belonged to the Mortimer barony of Wigmore. On the south coast Carmarthen was held as a base for expeditions directed northwards ; it was most conveniently reached by the overland route from Brecon down the valley of the Towy, but this was too exposed to the Welsh to be always practicable, and an alternative route existed along the south coast, which was always open owing to its accessibility by sea at all points. An advanced route of lateral communication ran from Chester through Shrewsbury, Ludlow and Hereford to Newport on Usk. In Pembrokeshire an

entirely separate colony existed, known as "Little England beyond Wales," where a number of Flemish settlers had been planted; its base was Pembroke, which was connected with Bristol by sea; and the farm-lands were protected by a fringe of small castles lying at the foot of the Prescelly hills. In later years Cardigan was established as a starting off point for a northwards invasion; it covered the crossing of the river Teify, and was in Crown hands; (it was reached by sea, or from Pembroke or from Carmarthen, according to circumstances). On the southern bank of the river, Cilgerran was built for the defence of Pembrokeshire, and was held by a Marcher baron. The general principle that can be seen in the location of the purely defensive castles was to keep to the lower ground, where the Englishmen would have the advantage, and to make use of the shelter offered by a natural obstacle (such as the Severn); and the system of protecting a line of communications was to occupy the next valley to it, or the neighbouring district.

The story of this period is one of a perpetual ebb and flow of the English border; now and then an expedition would establish a castle, and shortly afterwards the Welsh would recapture and destroy it; at one time a Welsh Prince would be in league with his English neighbour against a Welsh rival, at another he would be plundering his erstwhile ally, and then again relations with the Marcher baron would be resumed. Within the lands occupied by the English the Welsh normally lived quietly; but when an inducement to revolt came from without, they were ready to throw in their lot with it. The foreigner himself was not so much resented, but his castle was an object of hate as the sign of foreign dominance; consequently the Welsh are to be seen frequently destroying castles, yet on occasion leaving the garrison unmassacred, such as happened in Pembrokeshire in the winter of 1215 when 'the Welsh returned joyfully to their homes, but the French, driven out of all their holds, wandered hither and thither like birds in melancholy wise.' Welsh levies are often to be found serving in English expeditions in large numbers. All of these indications point to the conclusion that the Welshman, while worshipping the idea of national independence, could appreciate the benefits of English rule and under certain conditions co-operate with it.

These centuries reproduce much of what is now taking place on the Frontier of India, the functions of the castles being an exact representation of those of perimeter camps, as local bases from which the baron

controlled the countryside with a small mobile body of retainers. Towards the latter half of the XII century, Gerald of Barry* wrote that: "If Ireland was to be further conquered, the same policy should be pursued as in Wales; castles should be built as centres of permanent occupation, and in the field lances and bows should always be combined." This last sentence shows Gerald to have discussed Welsh warfare with soldiers (he was a cleric himself), and also lends the impression that the tactical combination of fire and shock action was learnt from Welsh border warfare, for Morris† remarks on its imperfect appreciation by the feudal army in general a century later. Another observation of Gerald's has a ring of the North-West Frontier in it: "In all these expeditions the King (Henry II) was unsuccessful, because he placed no-confidence in the prudent and well-informed chieftains of the country, but was principally advised by people remote from the marches, and ignorant of the manners and customs of the natives."

A particularly noticeable feature was the tendency to make the building of a castle the climax of an unsuccessful field operation; and the lack of real strength it arose from inevitably came to light soon afterwards. Deganwy in 1245 illustrates the flaw; following on an indecisive campaign it was built "as a thorn in the eye to the Welsh"; but a letter from one of those engaged survives to show how far the operation had been from a success: "We dwell here in watchings and fastings, in prayer, in cold and nakedness. In watchings for fear of the Welsh, with their sudden raids upon us by night. In fastings, for lack of victuals, since the halfpenny loaf cannot be got for less than fivepence. In prayer, that we may quickly return safe and sound to our homes. In cold and nakedness, for we live in houses of linen and have no winter clothes." After a precarious existence, Deganwy was lost in 1263. The history of the Builth circular road is of interest. Builth was first occupied in about 1095, but the district of Elfael was allowed to remain in Welsh ownership for another hundred years, presumably on a mutual understanding of non-aggression. In 1228 Hubert de Burgh sought to extend English control by opening a route to it from Montgomery down the valley of the Ithon. As soon as road clearing commenced, the local Welsh rose; Montgomery has to be relieved by a royal army, and with its assistance de Burgh then attempted to build a castle further advanced into the hills; but after

* Giraldus Cambrensis.

† The Welsh wars of King Edward I.

much fruitless endeavour the enterprise had to be abandoned, and the army withdrew, christening the site "Hubert's Folly"—strangely reminiscent of Waziristan. The road was eventually established during the preliminary operations to Edward's big campaign of 1277; but the effect was not final, and in both the risings of 1283 and 1294 the castle had to be relieved; even more so, the Brecon district was so unsettled in 1287 that the original intention of concentrating part of the field army there had to be abandoned, and the contingent be moved to Carmarthen by the south coast route. These examples show that decisive results were only produced by a success in the field; and that even so a strong garrison would have to be left to cope with the latent hostility that remained.

Communications figure prominently all through this period. From the earliest expedition woodmen are recorded as forming part of each force, for clearing paths for the army's supply and baggage train through the forests that filled every valley and which also harboured guerillas. Transport needs caused the building of a road over the Berwyn hills in 1165, which is still known as the Fforydd y Saes (the English road); yet even so weather conditions were too severe for the army, and the expedition had to be abandoned. Edward I is to be seen methodically establishing and garrisoning staging posts along his communications; but, none the less, the maintenance of the north coast route communications depended very largely upon sea transport, an aid that cannot be enlisted on the Indian frontier. In the absence of shipping, with his train successfully cut up by the Welsh, and his communications severed by flood, Edward was brought to great straits at Conway; and the hardship already referred to at Deganwy in 1245 arose through a failure of the ships. A peculiar instance occurred of the sea communications falling into hostile hands, which might be held to presage a different kind of modern danger; in 1098 an English force had entered Anglesey, aided by a fleet, but by chance a Scandinavian raider (Magnus Barefoot) arrived simultaneously and with impartial destructiveness broke up the English shipping; the English were obliged to withdraw, and did not re-enter Anglesey till one hundred and eighty years later.

The beginning of the end to this period of an occupied fringe of hills came in 1276, when Welsh truculence caused Edward I to organise operations on a large scale. Both as a ruler and a soldier, Edward I was a man of great capacity, and he had the country behind him.

Realising that England's continental affairs could not be given full attention so long as the Welsh border was a menace, Edward first of all set on foot a number of small operations in the winter of 1276 to re-establish border castles that had been lost, and then in 1277 made a methodical advance along the northern coast against Snowdon. All the features of frontier expeditions are to be found in this operation—a careful organisation of the transport, a deliberate advance accompanied by roadmaking, and the establishment of a defended post at each successive stage. The Welsh capitulated; and Edward's terms included the recognition of the old boundary line further west at Deganwy. In his advance along the coast, Edward had made great use of sea transport, and after the peace he developed Rhuddlan into a complete base for future operations, building it a harbour in addition to very powerful defence works. He then turned to the continent; but his doing so was the signal for another Welsh rising, and he was obliged to cancel his foreign affairs and redirect his attention to Wales. It was now clear that no matter how strongly the border defences were built, and no matter how firmly the border barons gave the King their support, peace would only come from a pacification of the *hinterland*; and so in 1282 and 1283 Edward encircled Snowdon from the sea, cut off Anglesey, and finally annexed all Wales; this he secured by means of a ring of defended works at Conway, Beaumaris,* Carnarvon, Criccieth, and Harlech, as well as others further south at Bere, Aberystwith and Cardigan; these it will be noticed are all accessible from the sea, and were actually relieved from it when attacked.

From 1284 onwards Wales became an English dependency, and was powerless to resist the force of the Crown, which had at its disposal, all the strength that scientific soldiering, in the form of armament and defence works, and that money could give. But the spirit of independence never died; and in 1400 when the internal dissensions leading to the wars of Roses gave the opportunity, the whole of Wales threw off

* A letter of the officials building Beaumaris is eloquent of the whole situation (it is quoted from Morris, "Welsh wars of King Edward I," p. 269): 'The writers almost sadly say that if they cannot have the money they want, well, so be it, let them have further orders and they will cut down the expenses, if this is really to the King's advantage. They conclude by reminding the treasurer that Wales may apparently be pacified, but Welshmen are Welshmen (mais vous savez que Galeys sont Galeys), and an English officer has to know them well, and to be on his guard in case the King's wars in France and Scotland continue, which heaven forbid. In any case money must be sent—this in a postscript after the letter has been closed and dated,—because, however much has been done, it will be of little value if more is not done.'

the yoke, under Owen Glendower, and for a time became virtually independent. The real pacification came in 1485 when a man of Welsh descent, Henry Tewdwr (Tudor) with Welsh arms, gained the crown of England on Bosworth field, and Welsh relationship with England in national politics assumed a co-equal aspect.

CONCLUSION.

The story of the Welsh border divides itself into two periods; the purely defensive Anglian one, lasting for four centuries, and the post-Conquest delayed offensive which continued for another two hundred years. The ruling factors in the problem were, firstly, that Wales was economically unable to support itself, and would not suffer the occupants of the neighbouring lowlands to enjoy their prosperity in peace; secondly, that Wales formed a natural part of the geographic whole—of Britain. The third factor was that the Welsh national *trait* of unfettered individualism rendered the people unable to govern themselves in peace, yet at the same time produced the deep-seated love of the idea of national independence which can be gauged in its re-appearance among the Celtic peoples to-day; and this same characteristic is to be found in the Pathan. The following thought, spoken in 1163, bears comparison with the thoughts of the Frontiersman, and betokens the fervour of the wish that fathered it: 'I doubt not that now, as often-times of yore, this race of mine may be brought low and much broken by the might of English arms. Yet the wrath of man, if God's anger be not added, will never utterly destroy it. For I am persuaded that no other race than this and no other tongue than this of Wales, happen what may, will answer in the great Day of Judgment for this little corner of the earth.' The wish attained partial realisation; and time has shown that the Welsh people have had no difficulty, while existing as part of the English realm, in keeping their national individuality. Its absolute realisation could not be let continue, because, when independent, Wales did not allow peace to her neighbours. Consequently the absolute ideal of independence had to be made give place to a comparative condition of national freedom that operated for the good of all. By a happy chance the perfect solution arrived in the end, when a man of Welsh descent came to the English throne, and the political relationship lost any tint of subservience and became instead one of co-existence. Perhaps a fundamental teaching in territorial control that emerges from the history of the March is that a country

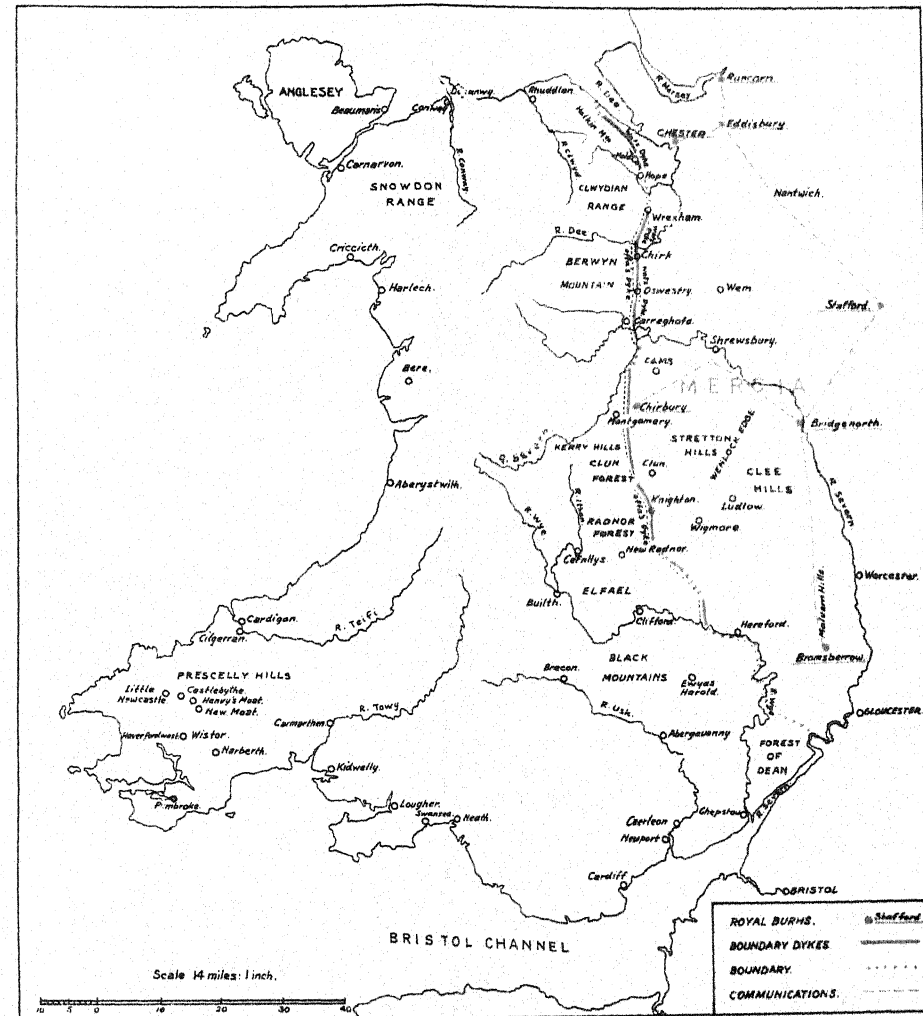
which is incapable of economic self-support, and which will not live peaceably with its neighbour, and which forms an integral geographic part of the other country, may rightly be forced to surrender its truly selfish insistence on complete independence to a common co-operation for the benefit of both ; but it is also to be seen that the compulsion needs to be effected in such a way as to satisfy the natural desire of the people for self-government.

The military lessons of the story are contained in the methods by which the border had to be safeguarded during the period while Wales remained independent. For many reasons the English were bound to control certain routes for despatching expeditions into the *hinterland* ; between these lay a defensively held strip of borderland. If a geographic resemblance may be drawn between the March and the Frontier, the base behind the Dee and Severn corresponds to the one lying behind the Indus ; the Chester-Rhuddlan route leading to the heart of Wales, in Snowdon and Anglesey, is analogous to the Rawalpindi-Khyber route ; and in the south, Brecon plays the part of Quetta or Chaman. On the March, the flanks of both these routes were protected by the occupation of the Alyn valley, the Elfael district, and the Usk valley, a condition which is partly but not wholly reproduced on the Frontier. The advanced lateral road Chester-Shrewsbury-Ludlow-Hereford has its counterpart on the Frontier in the road Peshawar-Kohat-Bannu-Zhob-Quetta ; and the belt of castles covering the one road corresponds to the occupied tribal territory which covers the Indian route. A diversity of interests governed the locations of the English castles ; for purely defensive purposes they were sited where they could be supported easily, and in terrain where English troops could fight at an advantage ; a teaching from experience which stands out clearly is the risk attached to a long line of communication in the hills. The Mercian artificial linear obstacle is noteworthy, designed to hinder the escape of raiders and to aid the action of an armed constabulary and villagers working within it. The story of the March also shows that the construction of a fortified post never formed an effective substitute for a decisive victory in the field, and that only such a victory would lead to settled conditions in an area ; but in addition the history shows that even centuries of settled life under the English would not entirely remove a desire for independence.

The sum of the experience from the English point of view is that England could never devote her full attention to foreign (continental)

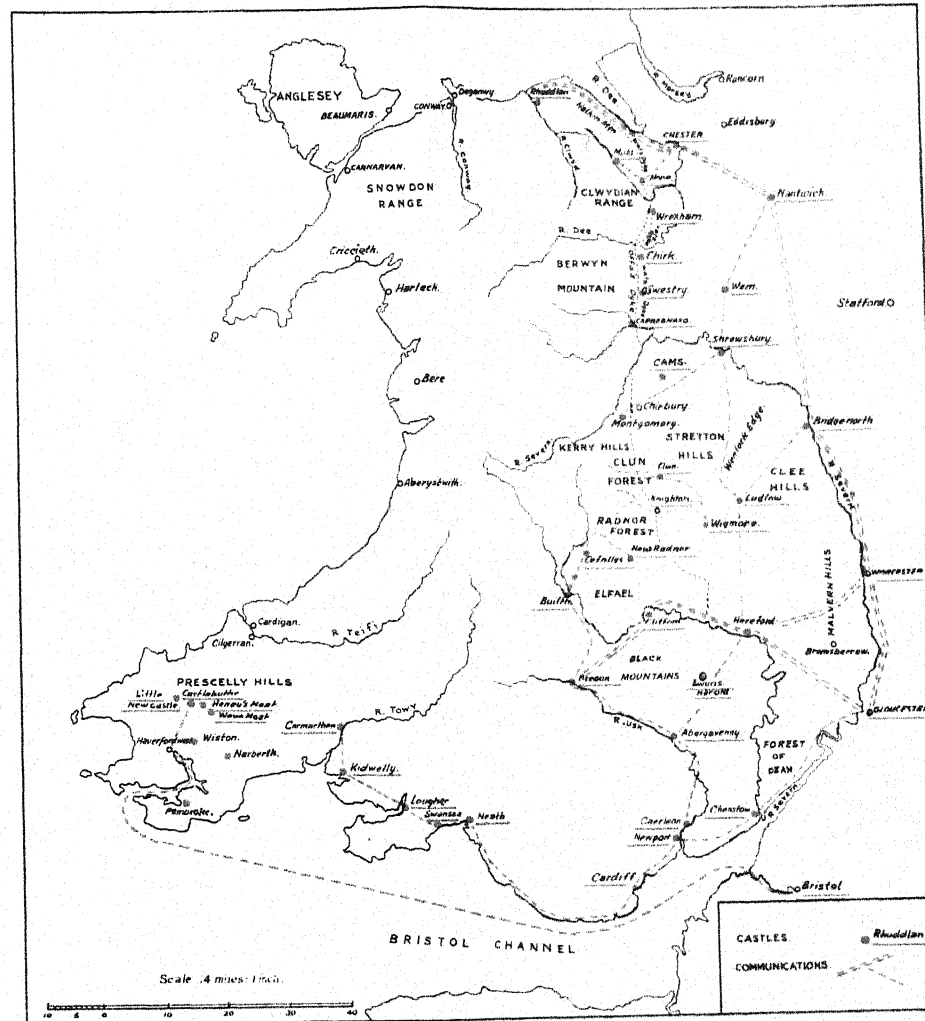
WELSH MARCH, PRE-CONQUEST PERIOD

MAP 1



WELSH MARCH, POST-CONQUEST PERIOD

MAP 2.



affairs so long as the Welsh border remained a menace ; and that the extent to which she was free to act depended upon the extent to which she was obliged to keep her eye on the support of her belt of Marcher lordships. The location of this belt was the outcome of many divergent interests ; but on the whole it was not far removed from being a scientifically chosen military one, that covered a practically designed system of communications.

“ A. D. C.-SHIP ” (AS OPPOSED TO GENERALSHIP.)

By “ PHOENIX.”

I have just read a book called “ Generalship ” by a General and am extremely annoyed. I think it is about time that these attacks on senior officers should cease. I am now going to take action, and the best kind of action is attack. I am about to attack what is almost, in my opinion, the most debased of all classes in the army, the A. D. C.

They are all young, or ought to be, and are responsible for almost every shortcoming, failure and what not of which generals are accused in war.

I have reached an age when I study the Army List and find it most interesting. The days when I looked upon the Army List merely as a means of discovering initials are long past. From the Army List I calculate that, provided I am not found out and provided also that the Selection Board are mental, I will become a Major-General when I am $71\frac{1}{2}$.

Now, Napoleon (who received promotion far too early) said that his actions were not due to genius, were not inspirations of the moment, but were the result of long, careful thought and of meditation. If that is the case, I think it is safe to say that there are few young officers in the army to-day who have any right to claim military genius or inspiration. (Although lots, quietly, in their heart of hearts, do.)

So if it is true that (*vide* “ Generalship ”) the correct age for a Divisional Commander is 35, I am willing to bet the equivalent of my bank overdraft that no officer serving now can possibly (owing to courses, leave, accounts, courts-martial and promotion or language examinations) have found time by the age of 35 to think or meditate sufficiently for a Divisional Commander.

You might of course find a suitable officer ; one who had been to no courses, who took no leave, who could not be trusted with accounts, who avoided courts-martial, who refused to compete in promotion examinations, and who would therefore be fit to command a division. I feel that there are insufficient men of this type to fill all the existing

Major-Generals' appointments. It will be agreed therefore that, with army life in peace being what it is, there is not enough time to think carefully or meditate on the duties of a Divisional Commander until you have reached an age when the Army List is of vital interest.

Now, the officer who wrote "Generalship" contends that a man above a certain age likes his comforts, is not as physically vigorous as he was when he was twenty years younger; and, if exposed to frost and damp (or heat and dust) he does not leap gracefully from foot to foot and yodel with *joie de vivre*. (A. D. Cs. on the other hand are generally capable of this.) All that is so obvious that it needs no comment. I contend however that the leaping yodeller of thirty-five is liable to make a far worse mess of battle fighting than the lumbago-ridden antiquary of fifty-five, *provided* the latter is properly cared for.

I do not claim, when I say 'cared for,' that a General should have a Chalet to live in, a Vi-spring mattress in the afternoons and sherry in his soup every night. Nor do I stand for the Plaza Toro General, who leads his troops from behind. I do say that, *properly A. D. Ce'ed*, ever a man who is prone to lumbago and fatigue can lead from in front and do all that is required of a Divisional Commander. Character and guts of the right kind do not depend on youth. Courage is a virtue which, if present in youth, is liable to last till old age provided physical well-being is maintained.

It is the job of the A. D. C. to see that this physical well-being is maintained!

There! Now, then!

We have Promotion Examinations.

Language Tests,

Small Arms Courses,

Every other kind of Courses,

Staff Colleges,

Senior Officers Schools,

Training, TEWTS, and Manœuvres;

but we have no proper arrangements for teaching an A. D. C. his job in war. On the efficiency of an A. D. C. may depend the success of a campaign.

Now for a little story to illustrate the importance of this subject.

Once upon a time there was a War. In this war was a Division. The commander of this division was a first class fighting soldier, who suffered from no disease or physical disability, *but* he was...ty. He was for his age, as hard as nails, energetic and indefatigable. The result was that after about a month he had succeeded in overdoing things. His judgment and grasp were not what they were; he began to forget things, and his staff became anxious.

One fine day his A. D. C., who was his nephew (such a nice boy), stopped a bullet. In his place, at short notice, was sent an officer of the Reserve. This officer was not a nice boy. In fact he wasn't a boy at all; he was—ty. Moreover he wasn't as energetic as he had been twenty years ago; but he had been a Club Secretary and he didn't care a hoot about Generals or Senior Officers. He knew perfectly well what it was to feel tired out; he also knew all about food and drink. He behaved in a most insubordinate manner.

Late one afternoon, when a battle was raging (they always do rage), he watched his General for some time. He then had a word with the G. S. O. 1. A few moments later he went up to the Divisional Commander, took him by the arm and said: "You are now coming back with me for a rest."

The Divisional Commander said, " *!*!*—! *x'x/* " *I! X./* " (or words to that effect).

The A. D. C. replied: "If you have any regard for your Division and for the success of this show, you will do as I say."

The Divisional Commander then said, "You go to **** ! Think I'm a child ? *//*! *xx.*!*".

The A. D. C. was bigger and stronger than the Divisional Commander and induced him towards a bivouac tent which had been skilfully concealed not far away. During the peregrination towards the bivouac the A. D. C. was several times dismissed, put under arrest and remanded for court-martial.

Placing the General on the ground the A. D. C. said to the General's batman, "Give the General that whisky and water. Take his boots off and change his socks. They need it."

This was the first battle of that kind the General had experienced, (he was a bachelor) and he didn't realise for some time that he was dealing with a born A. D. C. : Said the A. D. C. "The time is now

19-15 hours. I will call you at 21-00 hours when all reports will be in. If anything requiring your immediate presence occurs in the meantime, I will rouse you at once."

Within a few days the Divisional Commander became quite docile and far fitter, although I must own that until he had been roused once or twice before the scheduled time, he had not trusted his A.D.C.

Then there were other things. That A. D. C. always seemed to have handy some sandwiches, or a packet of cigarettes; a snack of whisky, an amusing and apropos story; a bit of worldly wisdom or comfort to give. He seemed to know what was wanted to soothe the brow or encourage the despondent mind. He was definitely a man of the world. The Staff knew that the successful handling of the Division was greatly due to that A. D. C. He got no D.S.O. He merely got the soubriquet 'Grannie.'

The thing that springs to the mind is this. Is the latest joined subaltern the most suitable A. D. C. in war? The odds are decidedly against it. He does not know enough about food. He possibly scorns much comfort. Full of the resilience of youth he cannot sympathise with fatigue. He has no business to have much worldly wisdom and, whatever his qualities, his General of—ty cannot and will not be dictated to in his personal actions by a child.

So you see it is all very difficult.

But should not the systematic training for war of A. D. Cs. be taken up? Especially since, until the fifth year of the war, we will not have Divisional Commanders of thirty-five? Even an A. D. C.'s hand-book would be of some use.

But, a brain wave, why not have Generals of thirty-five and As. de C. of—ty?

A. A. A.

BY THE MILITARY ACCOUNTANT-GENERAL.

There is a publication probably almost quite unknown to the Army in India which is called "An Introduction to Indian Government Accounts and Audit." It certainly sounds as though the reading of any book so repellently named would be very thirsty work but in reality it is not uninteresting and answers many questions which are constantly being asked in the ordinary course of Army administration. It is of importance as it defines very clearly the considered opinion of the Government of India as to the position of audit in the general scheme of their administration. The definition of the duties of audit which at present holds the field has been quoted in this book from para. 77 of the First Despatch on the Reforms, in the words: "In fact 'audit' will ask every question that might be expected from an intelligent taxpayer bent on getting the best value for his money." I am aware of no literature on this subject which applies specifically to the Army problems involved and consequently I have been forced to express my own views and opinions.

Accounts in their simplest form are really diaries, generally as in a cash book, maintained in a conventional form with the cash expenditure or receipts against each item. Many difficulties would be avoided if this fact was always remembered. A mere statement of a series of occurrences with their cash expenditure or receipts is sufficient for any accountant to work from in order to produce the conventional accounts. I remember a young officer who came to me in 1921 in Waziristan. He knew nothing about accounts but he had a locked box filled with a mass of papers. As far as I recollect he had been about four months in charge of either a rest camp or forwarding post and we were hunting him for the accounts of his imprest. His papers were mostly receipts of all kinds and he had them all dated but he had no accounts. I turned a man on to the job and in a few days he had answered all questions and we had cleared his imprest account and all was well. He didn't seem to realise that he really had the account and that it merely required to be put into shape.

When in charge of an account the most important thing to remember is that you have not unlimited power over its spending. As

an illustration, if you sent your servant down to the bazaar to buy a box of matches you would not be best pleased if he came back with a small tin of guava jelly. Similarly no Government will ever give any one of its servants a sum of money to be spent on such an indefinite object as "the good of the Army" or "the defence of the country" without stating some more definite and particular limitation. Such a thing could not be done; it would be a complete evasion of Government's own responsibilities, and for this reason any irregular payment which is discovered has to be either repaid to Government or covered by their sanction. Consequently whether you are an Army Commander or a District Commander or a C. O., or anyone else with the power of spending money or sanctioning expenditure, your powers have quite definite limitations and it is your duty to ascertain and to know those limits; to know quite definitely why the money is given and on what you may spend it. Questions are constantly arising on this point the answers to which require care, knowledge and experience and this is why the power to sanction the expenditure of Government money is placed in the hands of senior and trusted officers. Petty cases of perplexity occur every day and if they are not rightly answered all kinds of abuses would creep into Army custom; it is these small daily transactions which require careful watching as it is they which make all the difference to the purity of the administration. The limitations laid down by Government in respect of the spending of money are determined with a view to guiding Government servants towards a good administration. Good administration in peace goes far to form a happy and well disciplined Army. The spirit of an Army is formed in peace and every war begins with an Army at peace mobilised and sent to war. It is essential to have an Army which in peace believes in its leaders and whose leaders in turn inspire confidence in the country it defends. If peace administration is unsound this belief and confidence will not exist and the war will not begin well. We want to ensure that this initial dead weight does not exist.

It is at this point, before the money has been spent, that administration becomes linked with audit. Audit sees that the limitations laid down by Government are not exceeded and that their orders in respect of the spending of money are obeyed. It is a bad thing for everyone when audit is constantly pulling up administration, for it is then generally realized that there is something wrong with the machine.

The administration must know their regulations so well that they have an exact knowledge of their limitations and know when things are doubtful and when audit should be consulted. This primary consultation should, so far as possible, always take place whenever anything unusual is occurring. It lets audit in at an early point in the proceedings and enables them to realize fully the difficulties of the military administration. If audit is left to judge of matters always in the light of after events, it makes it extremely difficult for them to criticize fairly and a far more important point is that their advice when offered cannot avert trouble if a mistake has been made.

There are many directions, however, where audit cannot help. If, for instance, all the cheapest bungalows in a station are collared by the staff and the rest left for regimental officers, or if those near a unit's lines are taken by the staff who have motor car advances and the regimental officer who can't get these advances is pushed further out, the staff won't be loved and the spirit of the Army will suffer. Of course such things don't happen, but we all know that the first point in administration is that, just as a man in from hunting or shooting, looks first to his horse or his dog, as the regimental officer at the end of a march looks first to his men, so the staff officer all the time looks first to the rights and the comfort, well-being, discipline and duties of his formation. But it is not always clearly realized that he has an equal duty to Government and that he has no business to evade that duty. To say that audit won't let him, or that something must be done for audit purposes, is such an evasion. He should know and say that the man has no right to his claim or give the real administrative reason why something should be done. If audit suggests an alternative procedure with which he disagrees he should fight audit by reporting the case to higher authority. In fact each man is an intermediary within his own degree between Government and those below him. His duty is equally clear to see that a man does not get more than that to which he is entitled as to see that he gets his due. Consequently it is essential that he should know the intention of the rules and know what really is the basis of the covenant between Government and the men serving beneath him. Audit holds a watching brief for Government and for the man on the same lines, namely to see that both get their dues in accordance with existing rules.

In certain cases the rules act harshly, such cases are generally represented, the staff, as a rule, being quick to represent hardship, and it is in these cases that the staff usually seeks the advice of the Controller of Military Accounts. Audit is and must be bound strictly by rules but in the Army, audit is tempered by financial advice and the Controller who confirms a decision may advise the Army Commander to appeal against the operation of the rule on which that decision is based, and he may, when he thinks it necessary, assist in the drafting of that appeal. He frequently does assist the staff in this way; in any case he always sees their draft and adds his remarks.

We can sum up our conclusions so far in the following formulæ. The duty of audit is to see that Government gets its money's worth, it is also their duty to see that the individual gets his due. The duty of the administration is to see that the individual gets his due and Government its money's worth. In fact the objects of both are identical so why do they ever quarrel? The answer is that the keen man who goes all out at his job and does a great deal of work must make mistakes—no one can make good without making mistakes. We all know the man in deadly fear of making a mistake, who spends his time in passing the baby and is productive of no constructive work. These are the minority, not to be encouraged, but the man who does his work and makes decisions and consequently makes errors is the very type of man who will, unless he understands the position, strongly resent that which he regards as interference by audit. It is, therefore, most necessary that he should understand the position, when audit comes afterwards, charged with its double duty to answer the two questions, was the action authorized, and was it financially sound? Of course the military administrator must have considered these two points, but it is probable that he has approached his subject from a different angle and has given the various points a different value. It is essential, therefore, that it should be recognized that audit is a fellow-worker in the field of administration. A fellow-worker who approaches the subject purely from the financial aspect so that equal efficiency can be attained with less money spent, and who also sees that the particular limitations laid down in the rules are not exceeded. This is the crux of the whole matter and it is of the first importance that each party should fairly recognize and envisage the difficulties which the other confronts in carrying out his authorized duties.

There are two ways in which audit can carry out this duty. They can either be quick off the mark, auditing accounts almost currently, or they can wait until six months or a year's accounts are closed and then audit them. The disadvantage of the first method is that audit is crowding the administration, constantly making petty calls for small accounts and not giving them time to straighten out their own errors. This tends to annoyance and a loss of a sense of responsibility. The advantages are that errors are rapidly rectified and of smaller amount. The disadvantages of the second method are that errors are difficult to investigate so long after the event, since the responsible officers have gone and no one is interested. The advantages are that the administration has time to correct errors, they are not being crowded and their sense of responsibility is increased.

Our present Army standard of audit is, cash monthly and stores a quarterly audit, with of course current financial advice whenever it is asked for. I consider this arrangement sound.

In reading through this article it will be seen that we began to talk about accounts and almost immediately branched into administration; the truth is of course that there is nothing more to be said about accounts when once you regard them in the light of an accurate daily diary, and recognize that, when in the Army you keep an account to record your actions, you are most certainly an administrator. You may be a regimental quartermaster or you may be an Army Commander but you are an administrator, and you are keeping accounts, or someone is keeping them for you. In the education of the Army in India administration is not taught as a separate subject nor is there any good book on the subject of the administration of the Army in India for the use of Staff officers. Consequently few officers understand fully the intentions of Government in defining their limitations or completely grasp the implications of the covenant between Government and their servants, or know how to use accounts to assist their administration. I have seen a few officers who keep a mass of accounts and statistics which usually defeat their object by their very complexity, others rely on graphs of many colours. Graphs are a useless, decorative, uninformative device. The real secret of administration is to pick out the fewest possible number of facts you really must know and have them reported to you in plain English at stated periods. If you select the right questions to ask, the replies to them will, inevitably, if intelligently examined and pursued, give

you the whole picture. Accounts have two objects—one to enable you to prove that you have discharged your trust, and the other, as I have already explained, to assist you in the better discharge of your trust. It is laid upon audit independently to assure the Secretary of State that the first object has been fulfilled, it is also their duty to assist in the second object.

So far I have said nothing about fraud, or the detection of fraud, which is not the primary object of audit. Good accounts, good audit and very carefully verified replies to all audit queries together with a steady insistence by the administration that audit should examine and fully understand what they have recorded in their accounts, would go very far to prevent any continued fraud. These conditions presuppose a close co-operation between administration and audit, they assume that the explanations put up by subordinates will not be signed and forwarded as replies to audit queries without full and complete proof of their exact truth. Many of the serious swindles which I have seen in the Army have taken root after audit has been fobbed off with incorrect and unverified replies. Unfortunately we are all rather too prone to believe our own head clerk, whom we have ourselves in many cases promoted and all too frequently his word goes unverified. The correct way to deal with audit queries and observations is first to verify whether audit is correct and, if so, to acknowledge and amend your error. If audit is wrong to point out the correct rule. Argument wastes time and temper and audit officers have very definite orders to acknowledge an error at once. There is much sound literature floating about the Army on this subject of fraud and there is no need for any officer who does his duty intelligently to be let in. If you keep your own cash account and see that you get all missing store vouchers and examine them you can't be far wrong. Ever since the Unjust Steward in the New Testament took his pen and wrote quickly, these things always have happened, and I suppose they always will happen if you don't verify both stock and daily consumption as well as your books. Always you will find the man who won't do this and the same old trouble begins again.

Army officers should realize that the officers of the Military Accounts Department have a wide though not a detailed knowledge of Army matters. They deal with every Army activity, Arsenal, Dairy Farms, Factories, British and Indian regiments, Remount Depots, Medical Store Depots, Marine Dockyards and Air Force, and

everything else. They are conversant with matters which appear in all the Army accounts and they are able to compare the one with the other, and the queries and suggestions which they make are frequently due to the experience they have gained in other activities, though these may seem strange to the man with the narrower experience. I have often seen their suggestions cast aside as absurd by the man who has done the one job only and done it well. In fact the opinion of the man with the narrower vision is frequently preferred because it is treated as expert opinion, whereas the fact that the expert has not seen the alternative working is really a reason why the suggestion from the accountant should receive the greater weight. On the other hand, I reiterate the statement that "accounts" have not the detailed knowledge possessed by the Army administrators. In putting forward suggestions they must, at times, use wrong terms which sound ridiculous to Army ears. Also from time to time they must put forward suggestions which, owing to certain detailed facts, are quite impracticable. But arguments from the general to the particular have the clarifying effect of preventing the expert from surrounding himself with a haze of technical mystery and administering his small corner of the whole field of Army activities as though he were one of the Peculiar People. For these reasons I state that the criticisms of the Accounts Department are a healthy influence which should be treated with respect. On the other hand, a grave responsibility lies on the accounts that they do not advance wild, ill-informed or badly thought out suggestions.

There are many causes at work, such as alterations in Army administration, which force constant changes upon any system of Military Accounts. Such changes require careful planning and throw a considerable strain upon those responsible for carrying them out. The last change of this nature was the introduction of mechanized accounts in July of this year. They were introduced and experimented upon in each accounts office until the department had familiarized themselves with the new method. Then the accounts were got ready for the change and then the two systems were run side by side until the mechanized accounts had proved themselves. So far they seem to be a great success. At present the Army receives its accounts under each detailed head up to the last day of the previous month* on the 15th of the following month. This saves Rs. 1 $\frac{1}{4}$

* Except M. E. S. which are up to the 25th.

lakhs annually as compared with the old manual compilation as well as being presented a month earlier, and by means of the Air Mail the accounts from Quetta and from Burma, in fact from all-India, are consolidated at Delhi and presented, usually on the 12th, the outside date allowed being the 15th. Usually the accounts of no more than one or two small units are missing from this final all-India consolidation. I do not know that the final accounts are presented more quickly or more accurately in England and the size of the country and the natural postal delays are largely in favour of England. The average number of mistakes in an Indian Infantry Battalion averages about $1\frac{1}{2}$ in a month's accounts, so that although they are quick they are not inaccurate and most of the errors are petty. Undoubtedly the Army in India is well served by its accountants.

The Unit Accountant is a very isolated man who sits gravely arguing with the C. O.'s, Subalterns, Subedars and Jemadars and submitting his accounts so accurately and punctually month after month. He is practically always very well treated and sometimes rather spoilt by the unit. Generally he is a decent fellow who wishes to do his duty and live in peace in his strange surroundings. It is the same man who sits in the main office and later audits other accounts and later still, if he is good, grows up to be a Local Audit Officer. It is a queer command, this web of about 3,000 men spread over the Army, the Air Force and the Indian Marine in ones or twos or in big offices and yet whose work arrives in time with every one paid on the first of the month and the accounts complete and accurate each month in Delhi or in Simla.

REALISTIC FIELD FIRING.

A SUGGESTION.

BY BRIGADIER G. DE LA P. BERESFORD, M.C.

The provision of umpires in collective training is now given adequate consideration and the supply is rarely short of requirements.

It is suggested that collective battle practices, carried out by squadrons or companies or larger units, with or without the co-operation of machine guns and artillery, are capable of considerable improvement by using umpires in a fashion described later on. Let us examine the average field firing.

It is either done on a garrison field firing area, *i.e.*, stale ground, or on some area, the clearing of which is a complicated business carried out by Civil and Police. This means that an effort is always made to cram as much as possible into one or two days, with the result that the unit commander is in a hurry, the fire unit commander is in a still greater hurry, and the individual firer cannot help being in a hurry. With so many rounds in his pouches, the individual soldier is apt to forget all about his training and bangs off the lot, taking quite a lot of trouble over the empties, whereas, if he were doing the same show against a live enemy he would be acting in an entirely different fashion. Cover would be his motto, and he would fire a round now and then. Targets are invariably too numerous, too big and too conspicuous reminding one of the descriptions of the enemy at the Battle of Omdurman when they ought to be about as easy to discover as your enemy in the N. W. Frontier Hills. There must be some means of making the show more realistic. Disappearing targets suggest themselves—but they are not easy to work, because

(i) of the need for liaison between some one with the firers and those working the targets,

(ii) of the need for safety arrangements.

If you put in telephone lines, markers' pits, etc., on an area near cantonments it would very soon become stale.

A suggested solution lies in using almost invisible targets that are discovered by the firers as the result of information given to them by umpires. It is no use having umpires to point out the actual

targets. They must indicate to fire unit commanders the intensity of the enemy's fire and inform them of the effect produced by such fire as is brought to bear on the targets when discovered.

It is claimed that, in the great majority of areas over which we do squadron and company collective battle practices or regimental or battalion practices, it is possible to arrange "hidden" targets that will be discovered as the result of umpires holding up the progress of the firers and that, if umpires work well, the scheme will be made to progress in a realistic fashion.

The following points must be borne in mind—

(i) The scheme should not be carried out in great haste merely because "A" Squadron or "B" Company is waiting to fire next. Be prepared to go slow, to have troops or platoons absolutely pinned down until they work round or get covering fire. May be nothing will happen for a whole hour. Why not? In war attacks often fail.

(ii) Umpires must have gone over the ground very carefully with the director and they must be prepared to introduce situations to balance the scheme, chiefly in the form of increased or decreased effect of fire whether hostile or your own.

(iii) The individual commanding the squadron, company or whatever may be the unit doing the scheme, should be given an outline of the situation at least two days in advance and he should go over it, preferably on a sand model of the ground, with his subordinate commanders.

So far he only deals with the scheme up to the point where he starts on the field firing day. He has in his mind a good idea of the sort of action he will have to carry out, and he ought to be prepared to make a reasonably quick decision and get down to the business of carrying it out.

Rehearsals of collective practices over the actual ground, with or without blank, are not sound although they may produce something very fine on the day. If a scheme is badly done or goes wrong owing to some unforeseen circumstances, there is much to be gained in repeating the whole or part of it at once.

(iv) No commander should be required to make out a scheme and then command the unit doing it. This sounds elementary but the fact remains it happens very often.

INDOOR T. E. W. TS.

BY CAPTAIN F. L. ROBERTS.

"The business of the trainer is to present to the man his daily lessons in an interesting and varied shape....provided it has the novelty which attracts interest and produces the result at which he aims. Novelty will not be produced without effort and forethought."

I. T., Vol. I., 1932, Section 3 (3, 4).

INTRODUCTION.

Reviewing the average annual individual training programme, certainly of the infantry, it cannot but be admitted that "the daily round, the common task" tends to "furnish all we need to ask." Hence the difficulty which faces the instructor, especially in the smaller spheres of military activity, is that which is so well stressed in the opening chapter of Infantry Training, Vol. I, quoted above. How can he produce the same lessons in such a guise as to appear a novelty to those under instruction? This is a subject which should receive considerable attention and, as quoted above, cannot be successfully attempted 'without effort and forethought.'

The main trend of our training policy is to teach sub-unit leaders to rely on themselves. The individual training of junior leaders has consequently received considerable thought and promises, under existing conditions, to continue to receive this impetus from superior commanders.

As Infantry Training, Vol. I, stresses,—“The two main channels of instruction are by the eye and the ear. The usual tendency is to train too much by the ear and not enough by the eye.” (Ch. I, Sec. 3, 7). However much this statement may apply to the sub-unit commander of a British unit, it is very much more applicable to the junior leader of an Indian unit. Hence the suggestions here put forward are made with a view to training the junior leader of an Indian unit, though they may be applicable, in lesser degree, to his British confrere.

One of the established methods of achieving surprise in war is by the use of old weapons in a new manner. It is suggested that an old weapon—the cinema camera—could be used in a new manner to achieve novelty in instruction combined with training 'by the eye.'

It is intended here to discuss only the aspect of T. E. W. Ts., which are, perhaps, the only satisfactory method of training, individually, the junior leader for what he will be called upon to do in war. The cinema camera has been used for other forms of instruction in the army and, therefore, there is no novelty in this 'weapon,' but the writer suggests that its use as an "eye-instructor" for purposes of war training would be an assured novelty.

Three main questions appear to arise—Time, Expense and Method—and it is proposed to discuss these main problems here.

TIME.

(a) *When are films to be taken?*—It should be possible to overcome this difficulty during periods of platoon, company or battalion training, depending on what type of T. E. W. T. it is intended to frame.

Let it be supposed that the lesson to be taught is the work of a platoon commander in a company in the attack. The ground and troops having been selected, a measure of rehearsal will be necessary, but this should not prove to be a waste of time for the troops concerned. If they are normal troops they are liable to make mistakes, and will have learnt to correct those mistakes by the time the day for filming comes round. Finally, the 'dress-rehearsal' could be utilised for demonstration purposes for the rest of the battalion or even for platoon or company commanders from other units in the same station.

(b) *When are films to be shown?*—The individual training period is the obvious time. It is suggested that as many opportunities can be found for exhibiting this form of film as are found for carrying out outdoor or indoor T. E. W. Ts., whether the station be in the hills or in the plains. More especially is the indoor T. E. W. T. applicable to those stations at which training is hampered by the monsoon.

EXPENSE.

(a) *Cameras.*—There will undoubtedly be necessary an initial outlay in this respect. It is suggested, however, that, at first, one camera per District or, if that is too expensive, per Command be purchased from the Training Grant of the formation concerned. This one camera should be able, in a few months or even weeks, to take sufficient films to cover a sufficient variety of the phases of war. If

the actual purchase of cameras is considered too expensive an item, then it should be possible to hire cameras, for short periods, from some civilian firm.

(b) *Projectors*.—Nearly every station has its cinema theatre. It should not prove expensive, therefore, to arrange with the proprietor to show one film per month, or more if practicable and financially possible, during non-theatre hours. Furthermore, it should be possible, when new theatres are built under private enterprise, to include in the agreement a clause to the effect that such performances, at agreed cheap rates, shall be given as and when demanded during non-theatre hours.

(c) *Personnel*.—Assuming that theatre proprietors are willing to let their theatres and machines, as proposed above, the operative personnel will, naturally, be included in the terms of hire.

There remains the question of personnel to take the photographs. If a civilian firm is hired to take the film this question does not arise. Under other conditions, however, the difficulty does arise. There are, in the army, many successful amateur cinematographers, could not their services be utilised until a more permanent personnel has been trained? For permanent personnel, and such would appear necessary, it is suggested that selected volunteers for Vocational Training in this subject be attached to a film-producing firm on the understanding that they will be re-engaged in the army on agreed trade rates of pay and service. From this nucleus it should be possible to train others, also on the lines of Vocational Training, both in the taking of photos and in their eventual projection on to the screen.

(d) *Films*.—Another expensive item, but, with normal care, only an initial outlay. Films could be circulated, under the orders of the General Staff branch of a formation, through the Librarian in charge of the formation library. The cost of developing the film is normally included in the original price paid for the film.

METHOD.

The lesson to be taught will require the same measure of forethought as is given to outdoor exercises. Additional time, however, will be required to ensure that errors are eradicated before the exercise is actually filmed.

For purpose of example let it be assumed that it is intended to carry out a T. E. W. T. of a platoon in the attack in normal mobile

warfare, A. F. Vs. not being available. A suggested method of conducting the T. E. W. T. is here put forward.

(a) *Ground and objective.*—The first picture should show the ground from the platoon commander's point of view, as he would see it when receiving his orders from his company commander. The general and special ideas should be given out at this juncture. The film would, of course, be stopped during this period so as to give the class ample opportunity for studying the ground and their objective.

(b) *Verbal orders.*—The class would then be called on to give their verbal orders for the platoon (*i.e.*, to section leaders), discussion, ending with the D. S. solution, being carried out at this stage.

(c) *Various situations.*—The film would then continue, to show the course of action, in accordance with the D. S. solution, up to the next stage. This might be the holding-up of a flank platoon or the holding-up of one of the forward sections by enemy fire or an obstacle. The film would be stopped in order to give the class time in which to consider the situation and to give and discuss their replies. Then would follow the D. S. solution and a continuation of the film up to the next situation.

(d) *D. S. solution.*—It is obvious that the suggested solution will have to be worked out by the Unit or Directing Staff at the time when the T. E. W. T. is first worked out and rehearsed. Copies of this solution would accompany the film wherever it might be sent. It should not be difficult to mark the 'stops' on the film in such a manner as to enable the operator to stop his projector at the required places. It would also appear advisable for the officer who is to conduct the T. E. W. T. to hold a rehearsal, with the projector in operation, before the class is due to commence. This, after all, is the normal revision which should be carried out before any T. E. W. T. is undertaken.

CONCLUSION.

It is not suggested that the camera should be entirely substituted for out-of-door work. The suggestion is that an exercise on the film would help junior leaders to visualise more easily the conditions under which they will have to work in war and the conditions which they should attempt to visualise when attending a T. E. W. T. out-of-doors.

This form of teaching is best suited to platoon and section commanders, it might also be applied to company work but it is doubtful whether the camera's field is sufficiently wide for units of greater strength than that of a platoon.

The circulation of films from one arm of the service to another would facilitate an easier understanding of each other's difficulties ; here the film might be used to illustrate a lecture to another arm instead of for purposes of conducting a T. E. W. T. Similarly, films taken at Home could be circulated in India while films taken on the N.-W. Frontier, to depict mountain warfare problems, could, with probable advantage, be shown to troops on the Home Establishment.

The suggestions given above may have been considered and already condemned by others of wider experience than the writer. At present, however, the writer's experience with Indian Troops is that the most difficult part of conducting a T. E. W. T. is to make the class visualise the conditions existing in war, especially if the majority of the class has not been on active service.

It might be argued that manœuvres should supply this mental picture. But do they? Can section leaders, busy commanding their sections, be expected to try and visualise what the dispositions of a platoon or company look like from the rear? Furthermore, how many platoon or company headquarters are invisible to ground and air observation during manœuvres, or, how many times is a Light Automatic section commander faced with the problem of a damaged barrel (or other important part) which cannot be replaced?

The above suggestions are put forward in the hope that they may result in or give food for thought on the production of methods of teaching by eye and ear instead of depending too much on stereotyped methods and on the vague imaginings of an eye which has never 'seen.'

FATEH KHAN, BUNERWAL.

By "SHIGGADAR."

It was in 1911 that I first met Fateh Khan, Bunerwal. I was on short leave from Waziristan at Christmas time and was lunching with an Indian Officer of my regiment in a border village below the slopes of Pajja, a prominent mountain peak of the Buner hills, the southern spurs of which jut out into the Eusafzai plain while the northern half of the mountain lies in the trans-border territory of Buner.

I had come there after markhor and during lunch Fateh Khan, who was to be my shikari for the next three days on the mountain, was brought in and introduced to me. He was a small slim boy of about 17 years of age with a pleasant face, eyes like a hawk, a shaven head and the long straight side whiskers which are peculiar to his clan.

He had never met a sahib before and was consequently rather shy at first, but he soon blossomed out when we got on to the hillside later that day and I quickly realised that as a hillman and a shikari he was no mean expert at his trade. He was as active as a cat and a born stalker and it was an education to watch his movements on difficult ground.

We spent three very happy days together, scouring the hillside in search of markhor during the hours of daylight and spending the nights in caves high up on the mountain crags and as we got to know each other better Fateh Khan told me something of his short life's history.

He came from a village at the foot of the northern slopes of the Pajja range called Bompokha, which had been visited by our troops during the 1897 expedition (too long ago for Fateh Khan to remember) and which had become famous for its old headman, who was universally known by our soldiers as "Plum pudding Khan" on account of the enormous *pagri* which he wore upon his venerable head.

Like all other village boys Fateh Khan's only occupation during his early years was grazing his father's goats, but from the time he was a tiny boy he had a passion for shooting and whenever he got a chance—and this was often—he used to go off alone up the mountain side in search of game.

The first rifle he had ever possessed was an old jezail and this he used to load with a charge of black powder and small round stones from the river bed. The rifle was too heavy for him to carry in the ordinary way, so he would hump it crosswise on his back, with the sling across his forehead to take the strain, and thus stagger off in search of chikor (the red-legged partridge which in days gone by was nearly always to be found on the lower slopes of the Buner hills).

Later he took to stalking markhor and goral and when I met him he was the proud possessor of a highly ornamented and much prized Martini rifle and had to his credit a bag of ninety-seven head of big game, chiefly markhor but including three panthers.

We made great friends, Fateh Khan and I, and when our shoot was over he accompanied me as far as the border village where we had first met and there bade me farewell, to our mutual regret. There was something extraordinarily nice about him, due I think to the absolute simplicity of his upbringing. He had followed me about for three days like a faithful spaniel and in saying good-bye to him, as I expected for ever, I felt I was losing a real friend. I shall always remember his pathetic little face and murmur of "May God be with you" as he clasped my hand before I rode away.

* * * * *

One afternoon about eight months later I was lying sweating on my bed in the old mud fort at Tanai in South Waziristan. Those were the days before electric light and fans and the heat was abominable and the flies worse. Real sleep was impossible and I woke all sticky from a restless dose to hear the familiar sounds of the arrival of the weekly camel convoy which brought our rations up along the Gomal route *via* Nili and Kajuri Kach to Wana—the burbling of camels, the hoarse cries of the sarwans, an occasional whack with a thick stick and a series of thuds as the loads were dumped in the small mud enclosure just outside the fort wall. Then followed some sharp clear orders from the piquet commander, as he fell in the men of the piquets and escort, examined their rifles and ammunition and dismissed them; and finally the shuffling of many iron-shod chaplies in the gateway as the men who had been out on convoy duty strolled into the post and cheerily greeted their more fortunate comrades who had escaped the arduous task of piquetting barren hill-tops during the long hours of a frontier summer's day.

By this time I was thoroughly awake and was just thinking of getting up and cleansing a vile body by a bath in a tin tub, when the guard commander poked his head in at the door and said that a man outside wished to see me. I asked him who it was and he said it was some man from Buner who had arrived by the convoy.

I wasn't best pleased at being disturbed, particularly as it meant my going down to the fort gate to see the man, for no strangers were allowed inside the gate until they had been personally vetted by the Post Commander, or by a British officer if one happened to be in the Fort. However, I slipped on a shirt and shorts and a pair of chaplies and went down to the gate—and there to my astonishment I saw, standing beside the sentry, my late shikari, Fateh Khan of Bompokha.

He looked a particularly forlorn and disreputable little figure in his loose slate-coloured Pathan clothes and a very dirty *pagri*, but his face lit up when he saw me appear at the gate and he shook me warmly by the hand and held it while we exchanged the usual greetings.

I took him up to my room and asked him what on earth he was doing so far from his home and how he had got there. He said that he had met a sepoy of the Waziristan Militia on leave in Buner, who had told him great tales of service in the Militia and the wonderful shikar which was obtainable, with the result that there and then he made up his mind to come up to Waziristan and enlist. He had come by train as far as Darya Khan on the bank of the Indus and after crossing the river by ferry to Dera Ismail Khan, had walked all the rest of the way, a distance of over a hundred miles.

When I asked him what he thought of Waziristan now that he had seen it his face fell and in an apologetic sort of way he compared it with the ilex clad hills and prosperous cultivated valleys of his own Buner and said that Waziristan was the most poisonous country he had ever seen. This I was not surprised at, for my own experience told me that the road to Wana in the hot weather, which included a sixty mile trail across the desolate Derajat plain and thence over the Tobah Kandao (the Pass of Sighs) into the rocky barren Gomal valley, was as near to the road to hell as the imagination of man could conceive.

I could see that Fateh Khan was feeling deadly homesick, for this was the first time he had ever left his own country, so I put him in charge of the Indian officer commanding the post for the night and

told him to go on to Wana with the convoy next day (which I myself was going to do) and that I would see him again there.

Meanwhile I thought over what I was going to do about the boy, for whom I felt to some extent responsible, and I decided that it would be unwise and unfair to enlist him in the Militia, where he would almost certainly be homesick and unhappy. At the same time I realised that a lad of his stamp would be a distinct asset to a regiment stationed on the frontier, so when I saw him in Wana next day I put the suggestion to him that he should go back whence he came and enlist in my own Battalion, which was located within a reasonable distance of his home and amongst his own fellow-countrymen.

He was obviously pleased with this idea and he went off quite happily with the next down convoy, armed with a chit to the Adjutant of my regiment and sufficient money for the journey.

Some ten days later I heard that he had been enlisted in the regiment and the next time I went down on leave I went specially to recruits parade to see how Fateh Khan was shaping. There was my little wild man as a full blown recruit, dressed like all the others in the white undress kit and red *kullah* to his *pagri* which our recruits wore in those days, and I watched him as he solemnly—but rather awkwardly—did the goose-step in a large pair of ammunition boots to which his small feet were obviously unaccustomed.

After parade he came up smiling and he seemed perfectly happy and content and was evidently proud of being a soldier of His Majesty's forces.

That was the last I ever saw of Fateh Khan for soon after I got back to Waziristan I heard he had been on short leave to his home and had not returned—in fact he had deserted !

I naturally felt very guilty about this as it was entirely on my recommendation that the boy, who was well under the standard height, had been enlisted and I had undoubtedly let the regiment down. However there was nothing to be done about it as such cases were not uncommon with trans-border men enlisted in the regular army. Nevertheless I instituted enquiries through other men of the Militia who came from Buner and eventually discovered why Fateh Khan had deserted so basely. This is the story as I heard it.

One day Fateh Khan got an urgent message from his village summoning him home. He went to the Adjutant and asked for

leave and was duly given ten days, a concession which was only granted in urgent cases. On his arrival at Bompokha he found that his marriage had been arranged with the daughter of a distant relative, who was alleged to be very beautiful—the peach of the village. The marriage duly took place with all pomp and circumstance and Fateh Khan acquired such an overwhelming passion for his newly wedded spouse that when the day came for his departure he decided to tarry a while. Thus the honeymoon lengthened and the days went by and still Fateh Khan tarried, held fast by the soft entreaties of his lovely maid. Finally he realised that if he returned to duty he would get into very serious trouble for absence without leave, amounting possibly to dismissal from the service which would bring shame upon him and his family. He therefore decided to stay away and say no more about it.

I never expected to hear any more of him after that, but I was reminded at intervals of his existence by messages of good-will conveyed by him to me through sepoys returning from leave and on one occasion, after I had left the Militia and rejoined my regiment, he sent me a present of a markhor head which he had recently shot in Buner.

* * * * *

About a year later a dark and gloomy night found me stumbling along a rough hill track into the Buner hills on one of those “burn and scuttle” raids which were little heard of but occasionally took place before the war.

It was a funny little old fashioned stunt and this is how it came about.

We were on brigade training near the Cherat hills when we suddenly got orders to move to the Buner border—our brigade with an extra British battalion, a mountain battery and a squadron of cavalry attached. No reason was given for the move, but the camp was full of rumours and we realised that something exciting was about to happen.

We marched to Nowshera, a distance of ten or twelve miles, that afternoon and to Hoti-Mardan (the home of the Guides) another sixteen miles, next day. On arrival at Mardan we pushed on through the village of Hoti, crossed the Kalpani stream by the ford and bivouaced for the night in some fields on the left bank.

That was a night not soon to be forgotten for the rain came down in torrents and man and beast were soon soaked to the skin. As is always the case on such occasions the transport drivers came off worst and I shall always remember a pathetic sight of a miserable drabi, who could bear it no longer, sitting all alone, cold, hungry and disconsolate under his cart in the pelting rain weeping bitterly. I think it was the worst night I ever spent in camp. Our only consolation was that we were not worried by the staff, most of whom had fled for shelter to the officers' bungalows in Mardan and had got temporarily cut off from the troops by the flood which came roaring down the Kalpani river bed.

By daylight the camping ground was a bog, but fortunately for us the rain had stopped and we set off on the eighteen mile march to Rustum, a village near the Buner border where the bulk of the force arrived about 4 p.m. The transport had a ghastly time that day, as the last ten miles was along a very inferior *kacha* road which had been badly affected by the rain, and the last of the carts did not get into camp until well after dark.

It was not until we reached Rustum that we were told what all the trouble was about and there the Brigade Commander assembled all commanding officers and revealed the plan of operations.

It appeared that the Bunerwals had been raiding our border villages and that we were going to retaliate by destroying the two nearest villages on the Buner side of the frontier. Our route led over the Malandri Pass, the summit of which is about twelve miles distant from Rustum, and the villages to be destroyed consisted of a hamlet of about a dozen houses near the foot of the pass on the Buner side and another larger village four miles further on. We were to march at 11 p.m. that night and the Brigade Commander hoped to reach the top of the pass, where further orders would be issued, by daylight.

The job of my battalion was to act as advanced guard during the night march, to piquet the hills on either side of the pass while the villages were being destroyed, and to cover the withdrawal as rear guard during the return of the force to Rustum camp.

And so it came about, and a very interesting time we had.

The night march was an education in itself and demonstrated in an unforgettable way what an inextricable mess a force moving on a very dark night along a rough and ill-defined track in hilly country can get itself into.

Three particular incidents stand out in my memory : One, when a company commander with his whole company behind him fell into a dead sleep during a five minute halt, with the result that the troops in front of him moved on, while he and the remainder of the force got left behind a considerable distance : the second when the leading files of the advanced guard mistook a mere puddle in the track for a deep chasm, with the result that the whole force broke through a hedge on the side of the road, tramped through a cornfield and eventually regained the road by breaking through another hedge : the third when the cavalry squadron, which started in rear of the column and was supposed to remain there, took a wrong turning and eventually found themselves in front of the advanced guard.

It was indeed a murky night for the cold was bitter, the delays inevitable and everyone was dog tired.

Dawn found us not at the top of the pass as had been anticipated, but at the foot of it, and all we could see from there was that the slopes leading up to the pass were covered in dense scrub jungle. The pass itself was obscured by clouds, and we did not know whether it was held or not, though we had our suspicions as fires in that vicinity had been visible during the night march.

There followed a hurried conference in hushed whispers between the Brigade Commander and the commanding officers of the leading battalions and then the order came to push on.

Somewhat gingerly we scrubbed our way through the thick bushes and scrambled up the slopes ahead. When we were about half way up the shooting started and a comic battle began.

The enemy, who were not numerous, could be seen clearly in their dark blue clothes as they fitted from bush to bush in the vicinity of the pass. Every now and then they would discharge their blunderbusses at us and large chunks of lead would come hurtling overhead. We replied to some extent to these discharges, but once we realised that our foe was not a very dangerous one everyone hurried to get to the top as quickly as possible and the enemy hurried even quicker down the other side.

Meanwhile one of our companies which had been detached to do a flanking movement to the left, nearly succeeded in cutting off one or two of the enemy and would certainly have felled them dead, but for the fact that the naughty soldiers had forgotten to load their rifles before starting.

Thus the enemy escaped unscathed and the pass was ours ; a glorious but bloodless victory. Personally I never saw an enemy bullet go near anybody, but I remember afterwards an officer displaying with much pride a piece of lead which had struck a rock in his vicinity and fallen conveniently at his feet.

As we stood on top of the pass enveloped in cloud we could see absolutely nothing of the country beyond and a slight pause occurred, for no one quite fancied advancing down the other side into the unknown in a thick fog : There was in fact a slight tendency—as “when Horatius held the bridge,” and as often occurs in war—for those behind to cry forward and those in front to cry back. However the advance was soon set in motion again and the troops detailed for the destruction of the villages disappeared into the gloom while we, whose task was for the time being over, sat like crows upon the various adjoining hill tops, whence, once the mist had cleared, we got a very picturesque view of the subsequent operations.

The villages were found to be unoccupied, except in the case of the nearest hamlet where a solitary old dame—too old to be removed was found in sole possession. She was lying on a *charpoy* in one of the houses and cursed the troops right heartily for making war on women and her own people equally so for having deserted her. The old lady was removed to safety and the hamlet was soon on fire and by mid-day the further village was also in flames.

As the troops started to withdraw I remember standing beside our mountain battery which was in action on the pass and being much intrigued at watching them shelling, with considerable accuracy, the approaches to the farther village. The guns, which were the old pattern non-recoil ten pounders, were cocked up amongst some rocks—a very insecure perch, for each time a gun was fired it turned a sort of somersault backwards and had to be hauled into place again by the sweating gunners.

Some two hours later the advanced troops came through with what loot they had managed to collect, which consisted chiefly of “meat on hoof,” the sepoy's grinning broadly as they honked their goats and cattle along the rocky pathway.

By 4 p.m., the pass was clear and the withdrawal, which is usually the most ticklish part of a frontier operation, commenced and we were soon bounding down the hillside. The enemy, however,

failed to follow up, except for a solitary old gentleman who occupied the pass as soon as we had left it and bade us farewell with a series of resounding booms from his muzzle-loading fowling piece.

At the foot of the pass my battalion got mixed up with another one which was supposed to be covering our withdrawal and well do I remember the slanging match which took place between the two irate and red-faced commanding officers.

Then followed a long trail back to Rustum and it was dark before we turned the last corner and saw the welcome lights of the Brigade Camp.

So ended the last of the pre-war minor operations, which has seldom been heard of but which was notable for the fact that the troops which carried out the destruction of the villages—two well-known Punjabi battalions—covered fifty-four miles in thirty-six hours including a particularly trying night march in difficult country—no mean performance.

As I was plugging back to camp that night I got into conversation with an officer of the Frontier Constabulary and he told me about the raids made by the Bunerwals on our border villages which had led to our retaliation. Quite by chance I asked him who was the leader of the gang and to my astonishment, he replied "A damned young stinker called Fateh Khan of Bompokha."

So that was that—and that, incidentally, was the last I ever heard of Fateh Khan, except that he stopped raiding, probably owing to pressure brought upon him by the sufferers from our retaliation, and that some years later he died at his home.

What induced him to take to raiding, whether it was due to some personal grievance or whether he had wearied of stalking game and took to stalking fat bunniahs instead just for the fun of the thing, I was never able to discover. Nor does it matter much, for he merely followed in the footsteps of many other young bloods of his kind amongst our border tribes.

Nevertheless I shall always remember Fateh Khan, Bunerwal, as a good sportsman, a wonderful shikari and one of the pleasantest companions I ever had during the many years I cruised about the North-West Frontier of India.

LETTERS TO THE EDITOR.

AUSTRALIA.

DEAR SIR,

The following is an extract from a letter received from Lieut.-Colonel R. M. SCOBIE, M.C., R.E., attached to the Royal Military College, Australia :—

“ Army Headquarters out here is usually informed officially of any Indian Army officers who are coming to Australia. If any such who happen to come to Sydney take the trouble to leave a card on the Base Commandant, Victoria Barracks, it is much appreciated. The Military authorities are very good in seeing that such officers are properly looked after. They will put them up for all sorts of clubs, and generally watch their interests. If you think it useful, perhaps you would not mind posting this on to the proper quarter.”

It is suggested that the gist of the above might be inserted in the next issue of the U.*S. I. of I. Journal.

Yours faithfully,

R. D. INSKIP, LIEUT.-COLONEL,
General Staff.

MESOPOTAMIAN MEMORIAL CHURCH.

Appeal for Baghdad Project.

SIR,—There is at present no permanent church in Baghdad. The building which has been used for Divine Service since 1921 was originally a Turkish guard-house, and will shortly have to be demolished owing to town planning developments in its immediate neighbourhood, and especially the construction of a steel bridge across the River Tigris.

The British community in Baghdad, which now numbers some 400, is anxious that a permanent church should be built there, and an excellent site has recently been acquired for the purpose.

We believe that the total British casualties sustained during the Mesopotamian campaign were exceeded only on the Western Front. It is especially fitting that there should be in the capital of Mesopotamia a memorial to the 41,115 British lives sacrificed there during the Great War and to those who subsequently laid down their lives in Iraq.

It is, therefore, suggested that the new church should be called the "Mesopotamian Memorial Church." In this building it is hoped to have a memorial shrine containing a book inscribed with the names of those British men and women who gave their lives on Mesopotamian soil. Besides being a reminder of the past, the Memorial Church will make it possible for the British community in Baghdad to continue its witness to the Christian faith in worthy and dignified surroundings.

The total cost of a church, with adequate accommodation for 150 persons, is estimated by the resident British architect at some £4,000. The British community in Baghdad, which already supports unaided the cost of maintaining a resident chaplain, is not large enough to be able to provide more than about one-third of this sum.

We, therefore, appeal through you to those who have lost friends or relatives in Mesopotamia, or who have themselves served in the country, or who, for any other reason, wish to assist in the building of the memorial, in the confident hope that they will contribute to meet a pressing need.

For those who wish to inquire further into the scheme, may we suggest that communications should be addressed to Major-General H. Rowan-Robinson, Hammer Court, Liphook, Hants, who, from 1929 to 1933, served as the head of the British Advisory Military Mission in Iraq.

The Manager of the Eastern Bank, 2 and 3, Crosby-square, Bishopsgate, London, has kindly consented to receive contributions to the fund, to which a sum of approximately £1,000 has already been subscribed by local residents.

COSMO CANTUAR :
TRENCHARD.

CECIL MAUDE.
FRANCIS HUMPHRYS.

MILITARY NOTES.

BELGIUM.

The Conscript Contingent for 1934.

This is the last year in which the army—in common with all other belligerents in the Great War—will not suffer numerically from the lack of births during the war.

For 1934 the legal maximum of 44,000 has been obtained, and consists of 40,900 ordinary recruits and 3,100 reserve officers and N.C.O. candidates. The latter class, which consists of those who have attained a certain higher standard of education, serve for 14 months as against 8 to 13 months for the remainder, the exact period differing according to the arm of the service.

It is stated that 22,238 recruits have asked to receive their instruction in Flemish and 17,796 in French.

BULGARIA.

The Compulsory Labour Service.

The Compulsory Labour Service ("Trudovac") owes its origin to the state in which Bulgaria found herself at the close of the Great War. Her treasury was empty, and she had to face not only the problem of reparations, but also that of absorbing into civil life thousands of demobilized soldiers, and a certain number of refugees from her lost provinces.

At the same time her public works—buildings, roads, railways, etc.—were in a deplorable state after six years of almost continuous war; and in addition such industry as she possessed was totally inadequate.

By a Law of June, 1920, therefore, Bulgaria sought to set her house in order by the introduction of a Compulsory Labour Service. In the preamble to the Law, the following aims were set forth:—

"The object of the Trudovac is to retain and utilize for constructive purposes the service which the people were accustomed to give in the past in the form of military service"
and again

"To socialize the source of wealth of the nation, namely Labour, in the period of its greatest productivity, which would otherwise be wasted."

Under this Law all Bulgarians, male or female, on reaching the age of 20 or 16, respectively, became liable to provide manual labour for a period of one year in the case of men, and six months in the case of women.

The first batch of Trudovatsi were called up for service in May, 1921, but were released again in June, 1921, as the result of strong representations to the Council of Ambassadors by the Little Entente States, on the grounds that the Trudovac was in reality a camouflaged form of conscription, and as such, contrary to the Peace Treaties.

After due investigation the Council of Ambassadors decided that this contention could not be substantiated, but the Council did insist on the Bulgarian Government introducing certain amendments, which were incorporated in the Law of October, 1921, which is the Law in operation to-day. By these amendments the period of obligation was reduced to 8 and 4 months respectively in the case of males and females, the scope of the work on which the Trudovatsi would be employed was defined, monetary contributions were introduced in lieu of labour in certain cases, and, most important of all, it was laid down that in any one year not more than 30 per cent. of those becoming liable for service in that year were actually to be called up.

After the passage into Law of these amendments, the opposition of the Little Entente States was withdrawn, and the first embodiment took place in October, 1921.

The actual responsibility for calling up, which had originally belonged to the military recruiting offices, thereby lending colour to the Little Entente's contention, was now transferred to the communal authorities, and the whole administration was placed under the Ministry of Public Works in Sofia. The organization includes all its own administrative departments dealing with clothing, supply, accommodation, etc. The country is divided into eleven districts, each district providing its quota of labour battalions, which are again subdivided into groups. About two thousand permanent labour officers are employed, of which some eight hundred are retired military officers. An eight-hours' day is rigidly observed. The Trudovatsi wear a semi-military uniform, and are accommodated in disused barracks or in special camps.

The annual quota is called up each Spring. The first three weeks is devoted to clothing the men, giving them P. T. and teaching them the elements of discipline, and of the work at which they are to be employed. At the end of this period they take an oath of allegiance to the King, and of service to the State, and then start off on their work proper.

Parallel with the obligation of young people to this period of service, the same Law permits municipalities and communes to demand ten days manual service a year from all adults between the ages of 20 and 40. If for any reason this service cannot be rendered in person, the liability may be liquidated by paying the wages of a substitute for ten days.

In 1929 legislation had to be introduced to prevent evasion of this service by officials and civil servants; otherwise the obligation has been accepted willingly, and service in the Trudovac has become an integral part of Bulgarian life.

From an economic point of view, it has been an undoubted success. During the first three years of its existence, the costs of inception and administration exceeded the costed value of the work completed, but since then the service has always shown a steady profit to the State of between 100 and 150 per cent. As regards the progress in public works, between 1921 and 1932, 236,808 persons were actually called up, or an average of about 21,500 per annum. During this period some 2,344 kilometres of road were constructed or renovated, 696 kilometres of new railway was constructed, and 204 kilometres relaid and repaired, whilst over a thousand bridges and culverts were built.

FRANCE.

Organization of A. A. Artillery regiments.

The Law of July, 1932, laid down that the organization of the A. A. Artillery (*Défense contre Aéronefs*) was to consist of six regiments comprising 26 brigades of 54 batteries of which 45 were to be guns and 9 searchlights.

By the formation of a new regiment (404th) and the addition of one brigade to the 403rd Regiment, the present organization of A. A.

Artillery is now as follows:—

401st Regiment—

6 brigades of guns	H.Q. Paris.
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402nd Regiment—

3 brigades of guns	} H.Q. Metz.
2 brigades searchlights	

403rd Regiment—

6 brigades of guns	H.Q. Toul.
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404th Regiment—

2 brigades of guns	} H.Q. Tours.
2 brigades searchlights	

405th Regiment—

3 brigades of guns	H.Q. Sathonay.
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The present total of five regiments comprising 20 brigades of guns and 4 brigades of searchlights is, therefore, still short of the authorized establishment.

Cavalry mechanization.

As a result of the experiments carried out in 1933 with various types of motorized units, it is announced that the 4th Cavalry Division will be completely mechanized with effect from 1st May, and will have the following organization:—

4th Cavalry Division	..	H.Q.	..	Reims.
7th Brigade	..	H.Q.	..	Reims.
18th <i>Dragons</i>	..		..	Reims.
4th <i>Groupe</i> Armoured Cars	..		..	Reims.
8th Brigade	..	H.Q.	..	Verdun.
8th <i>Cuirassiers</i>	..		..	Verdun.
4th Battalion <i>Dragons Portés</i>			..	Verdun.
74th Regiment Horse Artillery	..		..	Verdun.

Attached—

1st <i>Groupement de Cavalerie</i>	..	Headquarters	Reims.
11th <i>Chasseurs à Cheval</i>	..		Vesoul.
9th <i>Dragons</i>	..		Epernay.
30th <i>Dragons</i>	..		Metz.

Abolition of Two Military Regions.

In July, 1933 M. Daladier, then Minister of War, introduced a *projet* for the reduction of two Military Regions, in the interests of economy.

This measure was never ratified, but has now been revived by Marshal Pétain in a decree authorizing the abolition of the 10th (H.Q. Rennes) and the 12th (H.Q. Limoges) Regions.

As a result the 12th will be absorbed by the 9th Region, and the 10th is to be split up between the 4th and 11th. At the same time various minor adjustments are to be made in the boundaries of other Regions.

This reorganization, which will take several months to complete, will result in the reduction of two regional (corps) staffs and various administrative economies, though the saving is very largely offset by the creation of the two fortified areas (Metz and Lauter) on the north-eastern frontier with separate G. Os. C. and staffs.

Reorganization of the Army.

A recent decree announces a further reorganization of units in France to take effect during the period September-November this year.

(a) The 8th Algerian and the 14th and 15th Moroccan native infantry regiments, each of three strong battalions, at present stationed in Morocco, will be transferred to France and formed into a new North African *groupement*.

As three additional Moroccan native infantry battalions have already been sent to France these moves will complete the transference of 12 battalions as foreshadowed in this year's budget.

The new *groupement* will in effect form an additional division (at present without any artillery) with headquarters at Châteauroux and the three regiments scattered over the 9th, 12th and 17th Regions in the west and south-west.

The strength of each of these native regiments is 66 officers and 2,326 other ranks including 9 native officers and 1,995 native other ranks.

(b) The Indo-Chinese-Madagascan *groupement* is also to be re-organized. At present it comprises two white colonial machine gun regiments (41st and 51st), each of two battalions and a *demi-brigade* of one Indo-Chinese and one Madagascan machine gun battalion, with the 12th Regiment of Colonial Artillery.

It has now been decided to disband the 51st Regiment, while the 41st Regiment is also to be withdrawn from the *groupement*, a decision as to its disposal being given later.

The *groupeement* therefore, will be reduced to only two battalions and a regiment of artillery.

Formation of 5th Air Region.

A recent decree announces important alterations in regard to the general principles of the employment and organization of the air units stationed in North Africa. At the present time these units come under the orders of the G. Os. C. respectively Morocco, Algeria and Tunisia, though, for purposes of co-ordination, there is a Deputy Inspector of Overseas Air Forces responsible to the Inspector-General of the Army of the Air in France.

With a view to co-ordinating the tasks which the military air forces are likely to be called upon to perform, whether in purely air operations, combined operations with the army or navy, or in territorial air defence, it has been decided to group the whole of the air units into one command organized on similar lines to the four regional commands in France. The new region will be known as the 5th Air Region.

The Commander of this Region is to be General Armengaud, a member of the *Conseil Supérieur de l'Air* and at the present time Inspector-General of Air Schools. He will take up his duties on 1st September.

He will be directly responsible to the Air Ministry, except that on any occasion when air forces are required to act in co-operation with the police in internal security or pacification measures in the various territories, he may be placed under the orders of the Governor-General, Algeria, or the Residents-General in Tunisia and Morocco, respectively, who are authorized either on receipt of instructions from the Air Ministry or on their own initiative, to transmit to him, or in case of urgency direct to the various air commanders concerned, orders concerning the participation of military air forces situated in their own particular territories. Should the necessity arise for combined operations involving the use of units of the army, navy or air force, the Governor and Residents-General will be responsible for regulating their employment and for nominating a co-ordinating authority to ensure co-operation.

In addition, so long as operations in Morocco render it necessary, and in principle until the end of 1934, the military air forces stationed in Morocco will be placed at the disposal of the General Officer Commanding troops by the Resident General, in so far as their employment and general duties are concerned.

New Military Decoration.

A new medal in three classes, to be known as a *Croix des Services Militaires Volontaires*, has been instituted for award to officers and non-commissioned officers of the reserve for meritorious service at schools and voluntary courses of instruction. Officers and non-commissioned officers of the regular army will also be eligible to receive this medal, for meritorious service in the instruction of reserve cadres.

Instruction of Officers in motor driving.

A recent decree announces that in view of the growth of mechanization, it is essential that all officers should be able to drive and repair motor vehicles and also act as instructors, should the necessity arise; at the present time only officers of tank, mechanized artillery and M.T. units are permitted to drive government motor vehicles.

Corps commanders will be responsible for seeing that these instructions are carried out and in cases where no facilities exist officers will be attached to motorized units as necessary.

A certificate will be issued to those reaching a certain standard of proficiency, which will enable them to drive government vehicles on duty.

Training.

Although no large scale manœuvres are to be held this year, the programme of training, in addition to the usual divisional camps, includes a number of interesting exercises as follows:—

- (a) A combined naval and military exercise to be held early in June on the Rhuis peninsula in Quiberon Bay, under the direction of General Mittelhauser.
- (b) Two exercises in the Air Defence of the Territory, under the direction of General Duchéne, Inspector-General of *Défense Aérienne du Territoire*.
 - (i) In the Paris, Amiens, Rouen and Le Mans Regions in June.
 - (ii) In the 14th Region (H.Q. Lyon) during August.
- (c) Manœuvres between the 4th Cavalry Division, which has just been completely motorized, and the 12th Infantry Division, at Mourmelon Camp (between Rheims and Châlons-sur-Marne) at the end of June, under General Altamayer, Inspector-General of Cavalry.

It is further reported that reservist officers who own private aeroplanes have been invited to take part in these manoeuvres. They will be employed on liaison duties.

(d) Experiments at Sissonne Camp during the period 1st—10th August to be carried out by the 10th and 3rd Infantry Divisions under the direction of General Dufieux, Inspector-General of Infantry.

(e) From 15th to 30th September a complete *Division de Formation* will be assembled at Mouremelon Camp for training. It will be the 41st Division, which does not exist in peace, and will be composed entirely of the reservists and cadres which would normally be allotted to this division on mobilization.

It will be equipped on a war footing and have a strength of some 15,000. The exercises in which it will take part will be directed by General Prételat, commanding the Paris Region. This will be the first time that such a division has been assembled for training.

ITALY.

Promulgation of a Royal Decree concerning "Anti-Aerial Protection of the National Territory and of the Civilian Population."

A Royal Decree was promulgated on 5th March, 1934, approving "regulations for the anti-aerial protection of the national territory and of the civil population."

The regulations contain ten articles, of which the following is the gist:—

Article 1 defines the possible measures as either being—

- (a) Means of defence, *i.e.*, those means which are capable of direct employment against aircraft. These means, with the exception of defence by aircraft, are known collectively as "Difesa Controaerea Territoriale" or D.I.C.A.T.
- (b) Means of protection, *i.e.*, those means applied direct to the objectives to be protected with the purpose of limiting the possibility of the attack or rendering its effects less serious. These means are known collectively as "Protezione Anti-Aerea" or P.A.A.

Both D.I.C.A.T. and P.A.A. are under the orders of the General Staff at the War Ministry.

Article 2.

The principal measures of the P.A.A. are defined as :—

- (1) Alarm signals for the population ;
- (2) Darkening of objectives ;
- (3) Camouflaging of objectives ;
- (4) Total or partial evacuation of the inhabitants of large cities and special localities ;
- (5) A.A. technique in building, the construction of shelters and the protection of pipes ;
- (6) Medical and anti-gas protection ;
- (7) Protection against fire ;
- (8) Protection of national artistic and scientific property.

Some of these measures will be enforced in time of peace, others only on mobilization.

The Ministry of War will issue necessary instructions through the Central Committee (*vide* Article 4).

Article 3.

The objectives, to be subjected to the above measures of P.A.A., will be :—

- (a) Towns which are especially liable to attack on account of their large population, of their position along the frontiers, or because important military and industrial establishments are situated there ;
- (b) Industrial establishments and depôts of important material (mechanical transport, aircraft, explosives, liquid fuel, &c.) ; warehouses, grain-stores, refrigerating plants, markets, &c. ; whether within cities or isolated ;
- (c) Railway lines and stations, harbours and airports ;
- (d) Special works : such as large bridges, docks, electric generating plants, hydraulic plants ; also river banks, frontier roads, &c.

Article 4.

The organization of anti-aerial protection, in time of peace, is allocated to the Ministry of War (General Staff), which acts through a "Central Interministerial Committee" and "Provincial and Communal Committees," all of which are permanent.

In time of war these committees will continue to function, the Central Committee remaining under the orders of the Ministry of War and the others passing to the orders of local military and naval authorities.

All measures of P.A.A. must be in full running order on the outbreak of hostilities.

Article 5.

Central Interministerial Committee.

Everything connected with the P.A.A. is under the orders of this body.

The President is a selected General Officer on the active list.

The Vice-President a General Officer of the Reserve.

Members.—

A representative of the President of the Council of Ministers.

A representative of each Ministry.

A representative of the Fascist Party.

A representative of the Committee of Civil Mobilization.

A representative of the Italian Red Cross.

A representative of the National Union of Reserve Officers.

A representative of the National Syndicate of Fascist Engineers.

A representative of the National Federation of House proprietors.

A representative of the Technical Federation of Firemen.

A representative of the Clergy.

The Central Committee studies all problems pertaining to P.A.A., draws up instructions, and arranges for the testing of materials and installations which may be employed for anti-aerial protection.

Provincial Committees are under its orders—instructions being transmitted to them on all P.A.A. questions affecting their respective provinces including P.A.A. test schemes.

Article 6.

The duties of Provincial Committees are similar to the above; their responsibility extending to the whole territory of the province and to all "objectives" contained therein, whether civil or military, public or private.

They are established in the provinces selected by the Central Committee, which comprise towns and localities where anti-aerial protection is of the greatest importance.

In other provinces, where no Provincial Committee is formed, its duties devolve automatically on the Prefect.

Provincial Committees are presided over by the Prefects and are composed of the—

- Chief of Police ;
- Federal Secretary (P.N.F.) ;
- Podesta of each locality concerned ;
- Senior Civil Engineer ;
- Chief of the Railway " Section ; "
- Provincial Director of Posts and Telegraphs ;
- Local Inspector of Monuments ;
- Director of the regional office of Corporative Inspection ;
- Commander of the Fire Brigade ;

also of representatives of the—

- Armed Forces ;
- Italian Red Cross Institution ;
- National Union of Reserve Officers ;
- Syndicate of Fascist Engineers ;
- National Federation of House proprietors ;
- More important Industrial Establishments ;
- Clergy.

Acting on the instructions received from the Central Committee, Provincial Committees study P.A.A. measures for their provinces and suggest schemes and projects which, after approval by the Central Committee, they put into force as far as possible in time of peace.

In the case of a province in which there are several important towns to which anti-aerial protection must be applied, the Provincial Committee may form several Communal Committees (presided over by the podesta) whose composition and duties are similar to those of Provincial Committees.

In large towns Provincial Committees are empowered to institute Zone Sub-Committees.

When requested to do so by the Central Committee and acting on the schemes drawn up by it, Provincial Committees will prepare and organize practices of their respective schemes of anti-aerial protection. Detachments of the armed forces may attend these experiments if it is considered necessary. The senior officer in each locality will be in charge of such practices.

Article 7.

In accordance with Articles 5 and 6, both the Central Committee and the Provincial Committees will have a permanent secretariat at their disposal.

The secretariat of the Central Committee is directed by a field officer, and is composed of officers on the active list.

The secretariats of Provincial Committees are constituted of officials of the prefectures assisted by a few reserve officers and civil engineers willing to give their services free.

Article 8.

Provincial Committees will compile a scheme of anti-aircraft protection for every single objective to be protected. These schemes will show what measures are to be taken in time of peace and on mobilization respectively.

Article 9.

The military or naval authorities, which in time of peace direct D.I.C.A.T. exercises, are responsible for the co-ordination of duties between the latter and Provincial Committees for P.A.A.

Article 10.

The measures governing anti-aerial protection will impose sacrifices and discomfort upon the civilian population, which must be prepared to endure them with courage and perfect discipline. In order to attain this, Provincial Committees will promote, amongst all classes and in accordance with the instructions of the Central Committee, an efficient propaganda, with practical exercises, lectures, etc., with the object of impressing on the population the necessity of the measures to be employed, in the interest of single individuals and of the entire nation.

It will thus be seen that not only is anti-aerial protection itself being highly organized in Italy, but that steps are being taken to bring all walks of life into the chain of responsibility, and to educate the Italian people as to its necessity.

Reduction in Pay.

As a result of a large deficit in the Budget for the second year in succession, a series of extraordinary measures were introduced by a Royal Decree of 15th April. Amongst other measures is a cut in the pay and salaries of all Government servants, drawing over 500 lire a month, the amount of the cut varying from 6 per cent. to 12 per cent.

according to income. In the case of certain Cabinet Ministers and other high officials, the rate of cut is 20 per cent. The cut took effect from the day after the publication of the Decree, that is from 16th April.

Taking the average cut as being 10 per cent., and working on the establishment figures for all Government employees for 1933, this cut should produce a saving of some £8,000,000 at par.

The New Promotion Rules.

1. A new promotion law has been recently formulated, in amplification of the laws of 1926 and 1931, with the object both of clearing the present block in promotion and of providing a quicker flow of promotion for the most efficient officers in the future. The new law contains three important innovations:—

- (a) The division of officers of the fighting arms—infantry, cavalry, artillery and engineers—into two distinct rosters.
 - (i) A Command Roster (“ Ruolo di Commanda ”).
 - (ii) A Mobilization Roster (“ Ruolo di Mobilitazione ”).
- (b) The introduction of a “ Promotion limit ” (“ limite di promovibilita ”) within the Command Roster.
- (c) The creation annually of a fixed number of “ compulsory vacancies ” for promotion in each rank. This applies to all arms, corps and services.

The various innovations are described in detail below.

2. The Command Roster.

This is to consist of officers who are mentally and physically active, who are actually serving in command of troops or are considered in every way fitted to do so. It will be exceptional for officers who have not served with troops to be retained on this roster, from which all appointments to higher commands will be made.

All officers join the Command Roster on first appointment and remain upon it automatically until they attain the rank of captain. Thereafter, up to the rank of colonel, their retention on this roster depends upon the result of their promotion examinations, and upon their general zeal and ability.

On reaching the rank of captain an officer has three alternatives open to him. He may, as the result of his application and professional ability, be retained upon the Command Roster. He may be transferred to the Mobilization Roster. Lastly, he may leave the service

altogether or take up some semi-military employment such as that of instructor to the militia.

3. *The Mobilization Roster.*

This roster is composed of officers between the ranks of captain and colonel, who, though not possessing the qualities requisite for retention on the Command Roster, yet are efficient in office organization and similar duties which are essential to the military machine and are at present carried out by combatant officers. These officers will continue to attend tactical exercises, etc., and will from time to time serve with troops. On mobilization they will normally be employed on the duties which they have been carrying out in peace but, if considered competent, they may be given a command. Their rate of promotion will be slower than that of officers on the Command Roster, and they will not normally rise above the rank of lieutenant-colonel or, in rare cases, of colonel. Selected majors may gain a year's seniority on the roster by passing special examinations, and in war any officers on the roster may be selected to go back to the Command Roster.

4. *Formation and Operation of the above Rosters.*

A certain number of officers in each rank affected are to be relegated annually, for the next four years, to the Mobilization Roster. The following table, in which the "total establishment" is purely hypothetical, shows the proportion of officers to be so relegated:—

Rank.	Total establishment at 1st July, 1934.	ESTABLISHMENT AT 1ST DECEMBER, 1934.	
		Command Roster.	Mobilization Roster.
Colonels	200	190	10
Lieut.-Colonels	350	320	30
Majors	600	560	40
Captains	1,900	1,750	150

The same numbers will be relegated each year until December, 1937, by which time 40 colonels out of every 200, 120 lieut.-colonels out of every 350, 160 majors out of every 600 and 600 captains out of every 1,900 will have been transferred to the Mobilization Roster.

After 31st December, 1937, the rosters will commence to operate normally. The following table, in which the figures given for

"compulsory vacancies" are hypothetical, shows the proportions of officers who will be promoted, transferred or retired from each rank annually :—

Rank.	COMMAND ROSTER.		MOBILIZATION ROSTER.	
	Compulsory vacancies.	How obtained.	Compulsory vacancies.	How obtained.
Colonels ..	35	10 promotions 5 retirements 20 transfers to Mobilization Roster.	20	20 retirements.
Lieut.-Colonels ..	60	35 promotions 5 retirements 20 transfers to Mobilization Roster.	30	30 retirements.
Majors ..	90	60 promotions 7 retirements 23 transfers to Mobilization Roster.	35	10 promotions. 25 retirements.
Captains ..	130	90 promotions 12 retirements 28 transfers to Mobilization Roster.	28	12 promotions. 16 retirements.
Subalterns ..	135	130 promotions 5 retirements.		

5. *The "Promotion limit" on the Command Roster.*

A maximum time-limit for service in each rank has been assessed. If officers have not been promoted by the time they have served the specified period, they will normally leave the active list and become either "at disposition" (a disposizione) or "off the strength" (fuori organico). In either case they will be given the next higher rank on leaving, provided they have the necessary qualifications for promotion. Exceptionally, the period of service in a rank, and consequently the "promotable limit," may be varied in individual cases by the Minister of War.

"At disposition" (a disposizione) is a position given to Generals, Colonels and to other Officers of the Command Roster who have reached the "promotable limit" but who otherwise would be eligible for further advancement. It corresponds roughly to our 'half-pay,' but officers "at disposition" in fact receive the full pay of their rank for a period of 4 years, before going to the reserve (in ausiliaria) for a further 8 years. "Off the strength" (fuori organico) is similar to

"at disposition" but officers in this case receive only four-fifths of their pay of rank. Service "off the strength" also lasts for 4 years, after which officers, if fit, go to the reserve. A number of officers in both categories may, by a new regulation, be employed as instructors to youth organizations and "premitaire," in which case they receive special allowances in addition to their full pay.

6. *Compulsory vacancies*

The average length of service in each rank on the Command Roster has been assessed as follows:—

Divisional-General	..	..	5 years
Brigadier	..	..	4 "
Colonel	..	..	6 "
Lieutenant-Colonel	..	..	4 "
Major	..	..	5 "
Captain	..	..	10 "
Subaltern	..	..	9 "

The number of "compulsory vacancies" (mentioned in paragraph 4), which will be created annually in each rank of the fighting arms, has been so calculated as to produce these periods of service.

No fixed formula has been introduced for "compulsory vacancies" in the case of corps and services which are not included in the Command and Mobilization Rosters. Such vacancies are to be created annually, but the number will depend upon the conditions ruling from time to time.

SPAIN.

Occupation of Ifni.

Various reports have from time to time been current that Spain intended to occupy the Ifni *enclave* on the south-west Moroccan seaboard (which she has never done since it was allotted to her in 1860). Such action is long overdue, since dissident tribes have for many years used the territory as a starting point for raids into French territory and as a safe "home" when pursued.

It is now reported that a force of nearly 1,000 native troops and some aircraft from Morocco is in course of landing in the territory, though the actual "occupation" appears to have been already effected by a Spanish political officer (Colonel Capaz) and two private soldiers.

Owing to the forbidding nature of the coast and the total lack of any harbour, a landing from the sea is always hazardous and difficult, and the most practical method for transporting and supplying any troops there, will probably be by air.

In this connection Colonel Capaz is reported to have secured the co-operation of the natives for the preparation of landing grounds.

A Government decree has just appointed Colonel Capaz to be Governor of Ifni and authorized him to create provisionally a Native Guard for the territory.

TURKEY.

The Five-Year Plan.

In order to lessen her perennial adverse trade balance, and to attempt to render the country more self-sufficient in time of war, the Turkish Government have launched an industrial plan called after the Russian model a "Five-Year Plan," though in practice it is likely to last longer.

The plan is to be financed by an initial credit from the U.S.S.R. of £T15,000,000, mostly in the form of machinery, supplemented by a further £T25,000,000 from local resources—spread over 5 budget years.

The U.S.S.R. loan will bear no interest, and is to be redeemed in 20 years by means of half-yearly instalments paid as far as possible in kind.

The industries to be developed first are textiles—metallurgical, paper, glass and artificial silk. To assist in the development rail communications are being improved with the Eregli-Zonguldak coal-bearing area—and with the Arghana copper mines, and all coastwise shipping companies have been grouped under Government control.

The whole project is controlled by the Ministry of National Economy, the portfolio of which is at present held by Celal Bey. At the same time a new Labour law is being prepared for submission to the Chamber.

It will provide a rigid code for governing conditions of labour in all industries, and will include clauses regarding child labour—compulsory insurance—compulsory provision of medical officers in factories of a given size, and the total prohibition of strikes and lockouts.

REVIEWS.

The World War.

BY LIDDELL-HART.

(Faber and Faber) 8/6.

When four years ago "The Real War" was published it was felt that the numerous and complex threads running through the various official histories, biographies, apologia and war fiction had at last been knitted into one complete work. The publication filled a definite need and although in the interim much additional evidence has been unearthed, the underlying facts as marshalled and examined in "The Real War" have remained substantially unchanged. Based on this new evidence Liddell-Hart has revised "The Real War" and to a certain extent expanded it, at the same time giving it the new title of "The World War." He considers that it now constitutes a substantially correct review of the whole conflagration especially as it has been cross-checked whilst the majority of the actors in the piece still remained able to substantiate or refute the representation of those scenes in which they figured. This is all to the good.

The Marne is dealt with more fully than in "The Real War" and it is clearly shown that although the British tardiness in turning did, in fact, lead to the creation of the opportunity, their slowness thereafter also led to a failure to reap the full benefit of that opportunity; Gallieni still remains the hero of the "turn of the tide."

Two scenes in 1914 have been added, one dealing with the events leading up to the first fall of Lemberg and the other in connection with the so-called "race to the sea." The latter centres mainly on the fighting on the Yser and around Ypres, and for perhaps the first time in British histories of the war full justice is done to the French for their part in the 1st Battle of Ypres and the magnificent way in which Dubois parted with his reserves is well worthy of note.

Brusilov's 1916 operations are dealt with at greater length and their effect is carefully traced, whilst that portion of the book dealing with the last period of the war from August 8th onwards is fuller and is more carefully treated than is usual in most of the war histories.

Throughout, the author has maintained an objective and non-controversial outlook. The narrative is easily followed, and the

writing is far from dull although the book is solely one of facts and the examination of those facts leading to conclusions and judgments which the author propounds clearly. With the summings-up few thinking soldiers will desire to join issue. All in all this is quite one of the best histories on the war which we are likely to get and Liddell-Hart is here seen at his best when his arguments are unbiassed and do not engender the feeling that they are being produced for effect.

The book is recommended to all students of military history and all prospective Staff College students would do well to read it.

H. R. S.

Infantry in Battle.

(THE INFANTRY JOURNAL, INC., WASHINGTON, D.C.) \$3.0.

This is a book written by the infantry training staff of the General Staff of the United States of America. The authors' object in publishing the book is to show the younger generation who have had no experience of war that adherence to principles and the carrying out of correct action in war is much more difficult under war conditions than it is in peace-time training. Each chapter starts with a quotation from the F. S. R. of the American or German armies, with a short dissertation amplifying it. Various narratives follow, each illustrating the quotation from instances of successful and unsuccessful action in actual battle in the Great War. The narratives are mostly taken from the personal memoranda of officers who took part in each action, and a sketch map for each is inset in the book.

One of the most difficult tasks of the peace-time instructor is to portray battle in such a way as to put a real picture into the minds of students who have had no experience of war. This book emphasizes the difference between real and mimic war and may help an officer, when he first serves in war, to adjust his mind to the special conditions which then prevail, and to tackle problems more successfully in consequence. The authors are to be congratulated on a valuable work, though readers are advised to read the book in snatches, as, otherwise, by its nature, it cannot help being as good a soporific as F. S. R. and similar manuals.

D. D. G.

The Ghost of Napoleon.

BY LIDDELL-HART (*Faber & Faber*, 7/6.)

With the central figure of Napoleon and a writer with a wealth of military historical knowledge like Liddell-Hart dealing with the influences which combined to the making of the Napoleonic practice and the effect of that practice down to the Great War, an absorbing and valuably interesting book is the natural result.

Marshal Saxe is taken as the earliest military thinker who had a direct influence on Napoleon by whom his ideas on the necessity for flexibility in organization were fully appreciated; then come Bourcet "the organizer of dispersion" and Guibert, the prophet of mobility. General Buonaparte's use of the various methods he inherited such as the development of skirmishes, the mobile field artillery and the movement of the army as a grouped whole, added to his perception of the true meaning of mobility, are well exemplified. To the Emperor Napoleon, however, is credited the development of the practice of the "mass" which is alleged not only to have destroyed the Empire, but to have been a precursor of the stultification of military ideas up to and including the Great War. The disciples of the Napoleonic creed, Jomini and Clausewitz, and their influence, on later day military thought, are next dealt with and the author here depicts Foch as accompanying Clausewitz in their common failure to grasp the real essential value of the material factors. As a result of these scrutinies the accusation that military conservatism and pedantry have always led to the enslavement of reason is then adduced.

The book concludes with a retrospect of military thought since Napoleon and this is perhaps the most interesting part of the book, for, whilst arguing for a truer and more intensive study of military history and a higher standard of mental ability in the present-day soldier, Liddell-Hart does show that he appreciates the difficulties in the way of achieving these desiderata.

As usual, with this author, the case is argued clearly and is convincingly supported from his great fund of military history. His battle cry of adaptability will be recognised by all thinking soldiers as the key of the problem and this becomes more so with the daily increase of modern scientific development.

It is hard enough for the soldier to keep abreast of modern invention and, even if he manages to achieve this, he is still left to decide

the ever-increasingly difficult question of how to utilize these developments and the effect such use will have on the machine with which he will eventually have to take the field. In this connection some good constructive ideas are put forward.

The author's suggestion that true reasoning is the only power in human affairs, does not carry the same conviction as his affirmation of the essential necessity of adaptability; whilst the omission of the effect of the peace-time limitations of finance, which in the modern state contribute so much to the inability of the advanced military thought to achieve its best results, is most noticeable.

The general trend of argument throughout the book is however very apposite and its study can only have beneficial results; especially if the author's conclusions are considered carefully, critically and without bias.

H. R. S.

'T. E. Lawrence' in Arabia and After.

BY LIDDELL-HART.

(Jonathan Cape, Ltd., London, 1934) sh. 15 net.

Liddell-Hart goes even further than the title of the book. He gives us a glimpse of Lawrence's family, of his early upbringing, of his tastes and hobbies and dreams. He shows how the theme of the Crusades caught Lawrence's imagination, so that while still at Oxford he, against expert advice, spent the long vacation in seeing the castles of the Crusaders in Syria, and so laid the foundation of that love of the desert and of the desert dweller which has influenced his life.

As may be expected, the major portion of the book is devoted to the Arab revolt. Liddell-Hart does not drag us headlong into it. In an interesting historical prologue, he gives us a review of the events which led up to the revolt, and even summarizes those events briefly for the benefit of readers who are not willing students of history.

He shows us how Lawrence's conception of irregular warfare sprung from a study of the writings of Marshal Saxe, published in 1757. Saxe pinned his faith to mobility. Mobility, in his opinion, was the factor which governed the economic size of any army. In his

attempts to achieve it, he proposed to cut down transport and rid himself of the encumbrance of magazines—in fact, his efforts were to prevent the ‘tail wagging the dog’ just as they are in our army to-day. He was not in favour of giving battle unless forced to it—he preferred to achieve results by manœuvre, by concentrating superior force unexpectedly against the enemy’s weak or vital points.

Liddell-Hart explains how Lawrence realized that these were methods at which the Bedouin irregulars would excel. Let them avoid the fighting of battles for battle’s sake, and attacks on entrenched positions: let them exploit their inherent mobility, appear when least expected, and do the maximum damage to the enemy and to his materials combined with the least possible damage to themselves. Their tactics should be those of tip and run: never to attempt to maintain or improve an advantage: always to move off and strike again somewhere else: to use the smallest force in the quickest time at the furthest point.

The author tells us graphically of the raids which followed, when railways were cut, and trains and troops destroyed after marches which must have taxed even Lawrence and his Bedouins to the utmost. Each man was self-contained, carrying on the saddle six weeks’ food for himself in the shape of a forty-five pound bag of flour. This gave him a range of over a thousand miles out and home. The camels lived on grazing as they marched. They served as an emergency ration in time of stress, being replaced from neighbouring tribes as required. They carried machine guns, with a crew of two men per gun. A few additional camels for carrying high explosives, and a raiding party was mobilized, ready to travel fifty miles a day, if necessary for many days on end. In truth, not even a stump was left to wag that dog.

The author takes us to the conclusion of the Palestine campaign and adds some chapters on Lawrence’s subsequent life.

His book is a comprehensive study of Lawrence in peace and war. It is well conceived, well put together, and gives the reader much food for thought. The latter can hardly fail to appreciate Lawrence’s soldierly skill. Whether he will appreciate equally his impatience of restraint, his barely concealed contempt for the regular soldier, and, above all, his sense of humour, is open to doubt. For

Lawrence to conceal the fact that he possessed a pass when travelling by train in Arab dress, to make facetious replies to the military police whose duty it was to question him, and thus to necessitate the summoning of a busy special intelligence officer on a hot day in July, may be humour, but it is undoubtedly of the perverted variety.

A. R. O. M.

United Service Institution of India.

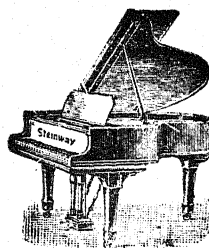
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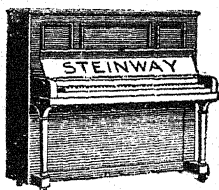
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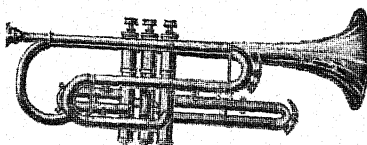
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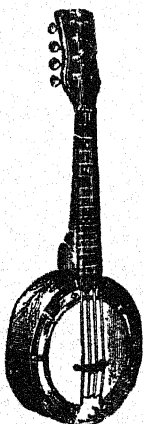


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I.—New Members.

The following new members joined the Institution from 22nd August to 30th November 1933 :—

ORDINARY MEMBERS.

Major-General H. W. Newcome, C.B., C.M.G., D.S.O.	Captain W. H. F. Routh. „ E. Symonds.
Brigadier H. S. Mosley, D.S.O.	„ D. C. Voelcker.
Lieut.-Colonel J. W. L. S. Hobart, D.S.O., M.C.	„ D. H. J. Williams.
Lieut.-Colonel W. E. R. Williams, O.B.E.	„ E. J. Willmer.
	„ J. W. T. Wooldridge.
Major A. J. L. Allen.	Lieut. J. K. Arthur.
„ D. R. Andotra, B.A.	„ H. E. D. Ashford.
„ W. A. Broadfoot.	„ E. J. C. Chaytor.
„ G. N. Francis.	„ U. C. Dubey.
„ F. R. Honeyball, M.B.E.	„ P. E. S. Finney.
„ Pir Mohd. Khan.	„ D. R. Guinness.
„ T. W. Venn, M.B.E.	„ L. J. E. Kewley.
„ G. N. Wood, O.B.E., M.C.	„ A. N. Nanda.
	„ H. W. Nicholson.
Captain W. N. Bates.	„ S. V. Phadnis.
„ F. P. Cheverton.	„ C. W. H. Rice.
„ H. Crookshank.	„ W. J. Shoolbred.
„ F. J. Edlmann.	„ E. C. Thompson.
„ D. Harrison	„ W. M. C. Wall.
„ A. H. Marshall.	2/Lieut. S. K. Angadi.
„ G. C. de V. Moss.	„ P. S. Gyani.
„ J. P. Sheridan, M.B.E., M.M.	„ Palat Sankaran Nair.
„ E. R. Page.	„ F. F. Pearson.
	Gentleman Cadet P. N. Nair.

HONORARY MEMBER.

F. V. Jakob, Esq.

Corrigenda.

Under the list of new members published in the October number of the Journal, for "C. C. C. Meadoore, Esq." substitute "C. C. C. Meadmore, Esq."

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per number, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary

or to Messrs. L. A. Stronach and Co., Advertising Consultants, Stronach House, Ballard Estate, Bombay.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from 9 A.M. until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military, naval and service interest.

There is a well-stocked library in the Institution, from which members can obtain books on loan free, in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member, it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible, and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

(6) If a book is not returned at the end of one month, it must be paid for if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library has been revised and is now available for sale at Rs. 2/8/- per copy, plus postage. The Library has been completely overhauled and all books re-classified, hence the new catalogue meets the general demand for an up-to-date production containing all military classics and other works likely to be of use to members of the Institution. Members who have not yet ordered their copies are advised to send a post card to the Librarian of the Institution, Simla.

V.—New Books.

BOOKS RECEIVED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>	<i>Class and No. allotted in U. S. I. of India Catalogue (revised 1934 edition).</i>
The Armaments Year-Book.	1933	.. League of Nations.	
From Serajevo to the Rhine—	1933	.. Arminius.	XVII. F 16.
Generals of the Great War.			
The Military Engineer in India.	1933	.. Lt.-Col. E. W. C.	IV. T 7.
Vol. I.		Sandes.	
Peacemaking 1919.	1933	.. Harold Nicolson.	XXV. P 5.
Mormugoa Headland and the Fort-	1932	.. T. W. Venn.	XXVI. M 20.
aleza Real.			
Marlborough—His Life and Times.	1933	.. Rt. Hon. Winston	XVII. M 16.
Vols. I & II.		S. Churchill.	
Wellington.	1927	.. Sir John Fortescue.	XVII. W 11.
Poland.	1933	.. Roman Dyboski.	XXI. P 13.A
Soviet Economic Policy in the East.	1933	.. Conolly.	XXV. S 25.
The Gallant Company, 1915—18.	1933	.. H. R. Williams.	XIV. (21) T 23.
A. & Q. or Military Administration	1933	.. Col. W. G. Lindsell.	VII. A 2.
in War, 3rd Edn.			
Military Organization and Admin-	1932	.. Col. W. G. Lindsell.	VII. M 2.
istration, 13th Edn.			
Napoleon III, the Modern Emperor.	1933	.. Robert Sencourt.	XVII. N 18.
New Imperial Ideals.	1930	.. Stokes.	XXV. N 5.
Four Score Years and Ten.	1933	.. Sir Bindon Blood.	XVII. B 23.
On Hill and Plain.	1933	.. Lord Hardinge.	XIX. O 4.
Round the Smoking Room Fire.	1933	.. Major C. E. Radclyffe.	
Ordered East	1933	.. "Ships Adjutant."	XXVI. O 12.
A Practieal Digest of Military Law.	1933	.. Townshend-Stephens.	VI. M 11.
		R.	
The United States of Europe.	1933	.. Sir Arthur Salter.	XXV. T 10.
The Intelligent Man's Review of	1933	.. G. D. H. Cole &	XXV. T 13.
Europe To Day.		M. I. Cole.	
India in 1931-32.	1933	.. Official.	XXV. I 20.
Historical Record, 2/4th Bombay	1933	.. J. T. Gorman.	XII. H 83.
Grenadiers (K. E. O.) 1796-1933.			

BOOKS ON ORDER.

The British Commonwealth of Nations	..	Duncan Hall.
Storm U. S. A.	.. ..	.. Claude Cockburn.
Cry Havoc	.. ..	.. Beverley Nichols.
The Paris Front	.. ..	.. Michel Corday.
My Struggle	.. ..	.. Adolf Hitler.
Menace of Japan	.. ..	.. Prof. O'Conroy.

VI. Promotion Examinations.

(a) *Campaigns*—(reference A. O. 243 of 1931, as amended by A. O. 80 of 1933 and A. O. 102 of 1933, as amended by A. Os. 119 and 155 of 1933).

The following table shows the campaigns on which military history papers will be set for Lieutenants for promotion to Captain in sub-head *b* (iii) and for Captains for promotion to Major in sub-head *d* (iii), with a list of books recommended for the study of each :—

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
March 1934	.. Egypt and Palestine, as covered by the History of the Great War—Military Operations—Egypt and Palestine, Vol. II, Parts I and II.	“History of the Great War—Military Operations—Egypt and Palestine, Vol. II, Parts I and II.” (Cyril Falls).
March 1934	.. France and Belgium,	“The Palestine Campaigns.” (Wavell).
October 1934	1914 ; up to and including the Aisne.	“History of the Great War—Military Operations—France and Belgium, 1914, Vol. I.”
March 1935		“Liaison 1914—A narrative of the Great Retreat.” (Spears). “The Memoirs of Marshal Joffre, Vol. I.” (Trans. Bentley Mott. Pub. Bles).

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
October 1934 .. March 1935 October 1935	Mesopotamia, up to and including the capture of Kut-al-Amara, October 1915.	"History of the Great War.—Military Operations—Mesopotamia, Vol. I." "Brief Outline of the Campaign in Mesopotamia, 1914—18." (Evans. Pub. Sifton Præd). "Tigris Gunboats." (Nunn).
October 1935 .. March 1936 October 1936	Gallipoli-Inception of the Campaign to May 1915.	"History of the Great War—Military Operations—Gallipoli, Vol. I. "Dardanelles" (Callwell). "Five Years in Turkey" (Liman Von Sanders). "The World Crisis" (Churchill).
March 1936 .. October 1936 March 1937	Mesopotamia, from October 1915, up to and including the capture and consolidation of Baghdad, April 1917.	"History of the Great War—Military Operations—Mesopotamia, Vols. II and III." "Brief Outline of the Campaign in Mesopotamia, 1914-18." (Evans Pub. Sifton Præd).

(b) Other Subjects.

In addition to the manuals and regulations mentioned in K. R. and R. A. I., the following books are recommended:—

- "Modern Military Administration, Organization and Transportation" (Harding-Newman).
- "Military Organization and Administration," 1932 (Lindsell).
- "A. & Q. or Military Administration in War" (Lindsell).
- "Military Law," 1932 (Banning).
- "The Defence of Duffers' Drift," 1929 (Swinton).

- "Tactical Schemes with Solutions, Series I and II" (Kirby and Kennedy).
- "Imperial Military Geography" (Cole).
- "Elements of Imperial Defence" (Boycott).
- "Changing Conditions of Imperial Defence" (Cole).

VII.—Staff College Examination.—(See Staff College (Camberley) Regulations 1930, obtainable from the Manager of Publications, Delhi or Calcutta.)

(a) Campaigns.

The following campaigns have been set for the Staff College Entrance Examination :—

Strategy of—

Napoleon's Campaign of 1796 in Italy.

Waterloo Campaign.

Peninsula Campaign up to and including the Battle of Salamanca.

The strategy and broad tactical lessons of—

The American Civil War.

Russo-Japanese War up to and including the Battle of Liao-Yang.

The Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of the War.

The East Prussian Campaign, 1914.

The strategy and tactics of—

The Palestine Campaign from 9th November 1917 to the end of the War.

The action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.

The 3rd Afghan War, 1919.

(b) The following books are recommended for the above campaigns :—

(i) The Strategy of Napoleon's Campaign in Italy, 1796.

Rise of General Buonaparte (Spencer Williamson).

Principles of War (Foch).

Vol. XI of 11th Edition of the Encyclopædia Britannica.

(ii) The Strategy of the Waterloo Campaign, 1815.

Six British Battles (Belloc).

Napoleon and Waterloo (Becke).

11th Edition of the Encyclopædia Britannica.

(iii) *The Strategy of the Peninsula Campaign, up to and including the Battle of Salamanca.*

Short History of the British Army (Sheppard).

Life of Wellington (Fortescue).

(iv) *The Strategy and Broad Tactical Lessons of the American Civil War.*

True History of the Civil War (G. C. Lee).

History of the Civil War in the United States, 1861—65 (W. B. Woods and J. E. Edmunds).

Stonewall Jackson (G. F. R. Henderson).

Robert E. Lee, the Soldier (Maurice).

The Generalship of Ulysses S. Grant (Fuller).

Sherman (Liddell Hart).

(v) *The Strategy and Broad Tactical Lessons of the Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).

Campaign of Liao-Yang (Rowan-Robinson).

The Japanese in Manchuria (Cordonnier).

Critical Comments only in the "Official Account: The Russo-Japanese War (Naval and Military)."

Staff Officer's Scrap Book (Ian Hamilton).

(vi) *The Strategy and Broad Tactical Lessons of the Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of War.*

Official Histories—Military Operations, France and Belgium
 Vols. I—V. Egypt and
 Palestine Vol. I and
 Vol. II, Parts I and II.
 Gallipoli, Vols. I and II.
 Mesopotamia, Vols. I and
 II.

The Great War of 1914—18 (Aston).

The Real War (Liddell Hart).

The World Crisis (Winston Churchill).

Brief History of the Mesopotamian Campaign (Evans).

The Palestine Campaign (Wavell).

(vii) *The Strategy and Broad Tactical Lessons of the East Prussian Campaign, 1914.*

Tannenburg—First 30 Days in East Prussia (Ironside).

The World Crisis, Eastern Front, 1931 (Winston Churchill).

The Real War (Liddell Hart).

(viii) *The Strategy and Tactics of the Palestine Campaign from 9th November 1917 to the end of the War.*

The Official History, Military Operations, Egypt and Palestine, from June 17th to the end of the War, Vol. II, Parts I and II.

The Palestine Campaign (Wavell).

(ix) *The Strategy and Tactics of the action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.*

The Official History, Military Operations, France and Belgium, Vol. I.

40 Days in 1914 (Maurice).

Liaison 1914 (E. L. Spears).

(x) *The Strategy and Tactics of the 3rd Afghan War, 1919.*

The Official Account (General Staff, India, 1926).

(c) In addition to the above, the following books are recommended for the various subjects :—

(i) *Strategy and Tactics.*

Soldiers and Statesmen (F. M. Sir W. Robertson).

Governments and War (Maurice).

British Strategy (Maurice).

Lectures on F. S. R. II (Fuller).

Lectures on F. S. R. III (Fuller).

War and Western Civilization, 1832—1932 (Fuller).

The British Way in Warfare (Liddell Hart).

Military History for the Staff College Entrance Examination (Sheppard).

In the Wake of the Tank (Martel).

Tactical Schemes with Solutions, Series I and II (Kirby and Kennedy).

Passing it on (Genl. Sir A. Skeen).

Report of the Dardanelles Commission.

(ii) *Organization, Administration and Transportation.*

Military Organization and Administration, 1932 (Lindsell).

A. & Q. or Military Administration in War (Lindsell).

Modern Military Administration, Organization and Transportation (Harding-Newman).

Administrative Schemes with Solutions (Kirby and Murison).

Outline of the Development of the British Army (Hastings-Anderson).

Short History of the British Army to 1914 (Sheppard).

The Annual Army Estimates of Effective and Non-Effective Services (H. M. S. O.).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

League of Nations : Armaments Year Book, 1933.

War Office Official Handbooks of Foreign Armies.

Declaration of British Disarmament Policy, 1932.

Commonsense about Disarmament (Lefebure).

(iii) *Military Law.*

Military Law, 1932 (Banning).

(iv) *The History and Organization of the Empire.*

Short History of the British Commonwealth (Ramsay).

Short History of British Expansion (Williamson)

British Empire (Basil Williams).

General Survey of the History of India (Sir Verney Lovett).
 India in 1929-30, 1930-31, 1931-32.
 Problem of the N.-W. F., 1890—1908, with a survey of policy since 1849 (Davies).
 Modern Egypt (Cromer, 1908).
 Egypt since Cromer, Vol. I. (Lord Lloyd).
 The History of Canada (W. L. Grant).
 The Union of South Africa (R. H. Brand).
 History of the Australasian Colonies (Jenks).
 Imperial Military Geography (Cole).
 Imperial Communications (Wakely).
 Changing Conditions of Imperial Defence (Cole).
 Elements of Imperial Defence (Boycott).

VIII.—Schemes, etc.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by introducing as many new schemes as possible. The Institution is now in possession of the complete set of schemes with solutions set at the 1933 Army Headquarters Staff College Course. These as well as *Precis of Lectures* can be supplied at annas eight per copy, plus postage. If maps are required a charge of Rs. 2 extra is charged.

In order to simplify their issue, the schemes have been classified as follows. When ordering, members are requested to give the subject of the schemes, etc., required.

STAFF COLLEGE SERIES, 1933.

(A)—Tactical Papers.

Continuous Exercise No. 1 "March Orders," with solution.

Continuous Exercise No. 2 "Operation Instructions," with solution.

Continuous Exercise No. 3 "Military Appreciation," with solution.

Continuous Exercise No. 4 "Attack Orders," with solution.

Continuous Exercise No. 5 "Defence Orders," with solution.

Strategy and Tactics—

Withdrawal Scheme.

Counter-Attack Scheme.

Attack Scheme.

Mountain Warfare Scheme.

Cavalry Exercise.

NOTE.—A number of schemes (with solutions) set for the 1932 A. H. Q. Staff College Course (referred to in the July 1933 number of the Journal) can be supplied at the same rate, *i.e.*, annas eight per copy, plus Rs. 2/- per map, if required.

(B)—Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931).

The History and Organization of the Empire (1932).

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932).

Tactical Lessons of the Great War (1932).

Cavalry, I (1932).

Cavalry, II (1932).

Artillery, I (1932).

Artillery, II (1932).

Engineers, I & II (1932).

Tactical Employment of Tanks (1932).

Chemical Warfare (1932).

Night Operations (1932).

Frontier Warfare (1932).

Air Co-operation (1932).

Military Law.

Military Law, I (1932).

Military Law, II (1932).

Military Law, III (1932).

Military Law, IV (1932).

Specimen Military Law Paper (1932).

Organization, Administration and Transportation.

Mobilization (1932).

Reinforcements in War (1932).

Organization, Administration and Transportation (Peace)—
Specimen Examination Paper with notes (1932).

Organization, Administration and Transportation (War)—Speci-
men Examination Paper (1932).

"Q" Services in Peace (1932).

Movements (1932).

Movements—Specimen Examination Paper (1932).

Supply of a Division in War (1932).

Supply Problem—Specimen Examination Paper (1932).

General.

Notes on Military Writing (1932).

Essay—Specimen Paper (1932).

Hints on Working for Examinations (1930).

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work, a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the Fund deem it desirable. Also the

Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk, will be considered to have the greater claim to the reward.

8. When the work of the year has either not been of sufficient value, or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS.

(With rank of officers and soldiers at the date of the Award.)

1889 .. BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

1891 .. SAWYER, Maj. H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Royal Air Force, Indian Air Force, Royal Indian Marine and the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded
a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lt.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a
gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.
- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards
(specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.), Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneer.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N.-W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200).
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.
- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps.
GHULAM ALI, Dafadar Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.

MACGREGOR MEMORIAL MEDALLISTS—(concl'd.).

- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
 KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
 SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal
 Garhwal Rifles.
- 1933 .. ABDUL GHAFUR, Havildar, K. G. O., Bengal Sappers
 and Miners.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

(With Rank of Officers at the date of the Essay.)

- 1872 .. ROBERTS, Lt.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
 YOUNG, Maj. G. F., 24th Punjab Infantry (specially
 awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lt.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
- 1898 .. MULLALY, Maj. H., R.E.
 CLAY, Capt. C. H., 43rd Gurkha Rifles (specially
 awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.E.
- 1900 .. THUILLIER, Capt. H. F., R.E.
 LUBBOCK, Capt. G., R.E. (specially awarded a silver
 medal).
- 1901 .. RANKEN, Lt.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
 BOND, Capt. R. F. G., R.E. (specially awarded a silver
 medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.

PRIZE ESSAY GOLD MEDALLISTS—(concl'd.).

- 1905 .. COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
 1907 .. WOOD, Maj. E. J. M., 99th Deccan Infantry.
 1908 .. JEUDWINE, Maj. H. S., R.A.
 1909 .. MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
 ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially
 awarded a silver medal).
 1911 .. Mr. D. PETRIE, M.A., Punjab Police.
 1912 .. CARTER, Maj. B. C., The King's Regiment.
 1913 .. THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
 1914 .. BAINBRIDGE, Col. W. F., D.S.O., 51st Sikhs (F. F.).
 NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides
 (specially awarded a silver medal).
 1916 .. CRUM, Maj. W. E., V.D., Calcutta Light Horse.
 1917 .. BLAKER, Maj. W. F., R.F.A.
 1918 .. GOMPERTZ, Capt. A. V., M.C., R.E.
 1919 .. GOMPERTZ, Capt. M. L. A., 108th Infantry.
 1920 .. KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
 1922 .. MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
 1923 .. KEEN, Col. F. S., D.S.O., I.A.
 1926 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi-
 ment.
 1927 .. HOGG, Maj. D. M.C.A., M.C., R.E.
 1928 .. FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
 1929 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi-
 ment.
 1930 .. DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
 1931 .. FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
 1932 .. THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).
 1933 .. Prize not awarded.

NOTICE.

(i) With effect from the 1st January 1934, members of ten years' standing who retire from the Service may continue their membership on payment of the reduced subscription of \$10/6 per annum.

(ii) Cadets of the Indian Military Academy are now eligible for membership of the Institution.

(iii) Officers of the Indian States Forces are eligible to compete in the Gold Medal Prize Essay Competition.

(iv) Officers and other ranks of the Royal Air Force, Royal Indian Marine and Indian Air Force, are eligible for the award of the MacGregor Memorial Medal.

(v) The revised Library Catalogue (1934) is now available and can be supplied to members and subscribers at Rs. 2/8/- per copy, plus postage.

GOLD MEDAL PRIZE ESSAY COMPETITION, 1934.

The Council has chosen the following subjects for the Gold Medal Prize Essay Competition for 1934 :—

- (a) “ It is often said that Indians are by nature divided into what might be called martial and non-martial races. This is a mere myth..... (p. 65, Indian Military College Committee's Report).

Examine this quotation and state your own conclusions,

or

- (b) The problem of the French in dealing with the tribes on the Southern and Eastern frontiers of Morocco, in the mountainous region of the Atlas, is in many ways similar to ours on the North-West Frontier of India.

Contrast the two methods of control and administration and state in some detail what is, in your opinion, the best system of defence and control of the North-West Frontier of India (from Chitral to the Persian Frontier inclusive).

The following are the conditions of the competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force, Auxiliary Forces and Indian State Forces.
- (2) Essays must be type-written and submitted in triplicate.
- (3) When reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be strictly anonymous. Each must have a motto, and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1934.

- (6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1934.
- (8) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

List of unsuccessful essays received in connection with the 1933
Gold Medal Prize Essay Competition :—

- "Manners Makyth Man".
- "Festina Jeldi".
- "Rally".
- "Audacious".
- "Lude Ludum".
- "The Legend of Baridzai."
- "Pintail".
- "Fide at Fidelitate".
- "Per ardua ad Viridia".

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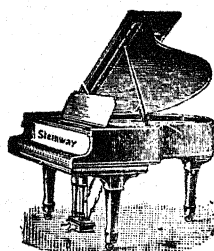
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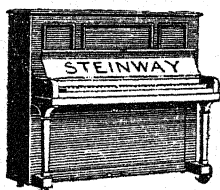
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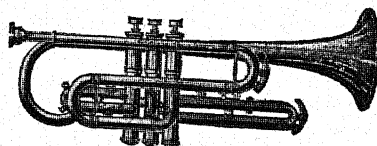
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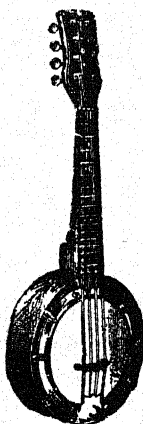
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I.—New Members.

The following new members joined the Institution from 1st December 1933 to 1st April 1934 :—

LIFE MEMBER.

2/Lieut. S. C. Misra.

ORDINARY MEMBERS.

Major	R. C. Herron, O.B.E.
Capt.	J. A. Codrington.
"	W. E. Dean.
"	E. L. Farnall.
"	L. J. C. Loch.
"	R. A. Milne.
"	J. L. C. Napier.
"	F. H. Frost, M.B.E.
"	F. W. Austin.
Lieut.	R. P. Bridge.
"	R. C. Cottrell-Hill.
"	N. L. Gordon.
"	L. T. Grove.
"	W. M. T. Magan.
"	T. Murari.
"	L. L. J. Read.
"	M. Thorold.
2/Lieut.	W. P. J. Cranston.
"	M. S. Dhillon.
"	R. Elsmie.
"	P. W. P. Green.
"	A. G. Puttock.

Gentleman Cadet Ranbir Singh.

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per number, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary or to Messrs. L. A. Stronach & Co., Advertising Consultants, Stronach House, Ballard Estate, Bombay.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication

of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from 9 A.M. until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military, naval and service interest.

There is a well-stocked library in the Institution, from which members can obtain books on loan free, in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member, it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible, and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of date of issue.

(6) If a book is not returned at the end of one month, it must be paid for if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee, and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules, and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library has been revised and is now available for sale at Rs. 2/8/- per copy, plus postage. The Library has been completely overhauled and all books re-classified, hence the new catalogue meets the general demand for an up-to-date production containing all military classics and other works likely to be of use to members of the Institution. Members who have not yet ordered their copies are advised to send a post card to the Librarian of the Institution, Simla.

V.—New Books.

BOOKS RECEIVED.

<i>Title.</i>	<i>Published.</i>	<i>Author.</i>	<i>Class and No. allotted in U. S. I. of India Catalogue (revised 1934 edition).</i>
Cry Havoc	1933	.. Beverley Nichols.	XXV. C. 14.
The Paris Front 1914—18	1933	.. Michel Corday.	XIV. (21) P. 14.
My Struggle	1933	.. Adolf Hitler.	XVII. H. 27.
The Menace of Japan	1933	.. T. O'Conory.	XXV. J. 1.
British Documents on the Origins of the War 1898-1914 (Vols. VIII and IX).	1933	.. Gooch and Temperley.	XXI. B. 11.
Whitaker's Almanack.	1934	..	..
Saddle Up—A. Guide to Equitation and Stable Management.	1933	.. Capt. F. C. Hitchcock.	XIX. S. 12.
History of the 4th Bn. 6th Rajputana Rifles (Outram's Rifles).	1933	.. H. G. Rawlinson.	XII. H. S4.
Nazi Germany Explained	1933	.. Vernon Bartlett.	XXV. G. 13.
The White Armies of Russia	1933	.. George Stewart.	XXV. R. 30.
The Grey Battalion	1933	.. May Tilton	XIV. (21) G. 22.
Foch, The Man of Orleans (2nd edn.)	1933	.. Liddell Hart.	XVII. F. 6.
The Ghost of Napoleon.	1933	.. Liddell Hart.	X. N. 5.
Our Neighbours To-day and Yesterday	1933	.. Harrison Brown and others.	XXV. O. 8.
Elementary Tactics, An Introduction to the Art of War, British School, Vol. II.	1934	.. Lt.-Col. Pakenham- Walsh and Maj. Dorman- Smith.	XIII. E. 5.
History of the 2nd Sikhs, 12th Frontier Force Regiment, 1846-1933.	1933	.. May, C. W.	XII H. 85.
The Battle of Le Cateau	.. 1933	.. War Office.	XIV (21) B. 23.

BOOKS ON ORDER.

Smith-Dorrien	..	.. C. Ballard.
The Suez Canal—Its Past, Present and Future	..	.. Sir Arnold Wilson.
Marlborough, His Life and Times, Vol. II	..	.. Winston Churchill.
A Political Geography of the British Empire	..	.. C. B. Fawcett.

ACKNOWLEDGMENT.

Two volumes of "Elphinstone's Account of a Journey to Cabool," dated 1819, have been presented to the Library of the Institution by Captain C. A. Grey, 5/11th Sikh Regiment.

The Institution is in possession of a collection of old and rare books presented by members from time to time and, while such books are not available for circulation, they can be seen by members visiting Simla. The Secretary will be glad to acknowledge the gift of old books, trophies and medals, etc., presented to the Institution.

VI.—Promotion Examinations.

(a) *Campaigns*—(reference A. O. 243 of 1931, as amended by A. O. 80 of 1933 and A. O. 102 of 1933, as amended by A. Os. 119 and 155 of 1933 and I. A. O. 651 of 1933).

The following table shows the campaigns on which military history papers will be set for Lieutenants for promotion to Captain in sub-head *b* (iii) and for Captains for promotion to Major in sub-head *d* (iii), with a list of books recommended for the study of each :—

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
March 1934	.. Egypt and Palestine, as covered by the History of the Great War—Military Operations—Egypt and Palestine, Vol. II, Parts I and II.	“History of the Great War—Military Operations—Egypt and Palestine, Vol. II, Parts I and II.” (Cyril Falls). “The Palestine Campaigns.” (Wavell).
March 1934 October 1934 March 1935	.. France and Belgium, 1914 ; up to and including the Aisne.	“History of the Great War—Military Operations—France and Belgium, 1914, Vol. I.” Revised Edition (for Oct. 1934 and March 1935 Examinations). “Liaison 1914—A narrative of the Great Retreat.” (Spears). “The Memoirs of Marshal Joffre, Vol. I.” (Trans. Bentley Mott. Pub. Bles).
October 1934 March 1935 October 1935	.. Mesopotamia, up to and including the capture of Kut-al-Amara, October 1915.	“History of the Great War.—Military Operations—Mesopotamia, Vol. I.”

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
		"Brief Outline of the Campaign in Mesopotamia, 1914—18" (Evans. Pub. Sifton Praed). "Tigris Gunboats" (Nunn).
October 1935 ..	Gallipoli-Inception of the	"History of the Great
March 1936	Campaign to May 1915.	War—Military Operations—Gallipoli, Vol. I.
October 1936		"Dardanelles" (Callwell).
		"Five Years in Turkey" (Liman Von Sanders).
		"The World Crisis" (Churchill).
March 1936 ..	Mesopotamia, from Octo-	"History of the Great
October 1936	ber 1915, up to and in-	War—Military Operations—Mesopotamia,
March 1937	cluding the capture and	Vols. II and III."
	consolidation of Bagh-	"Brief Outline of the
	dad, April 1917.	Campaign in Mesopotamia, 1914—18" (Evans. Pub. Sifton Praed).

The campaigns set for Majors, R.A.M.C. and R.A.V.C. up to and including 1935 are published in I.A.O.'s of 651 of 1933 and 25 of 1934.

(b) *Other Subjects.*

In addition to the manuals and regulations mentioned in K. R. and R. A. I., the following books are recommended:—

- "Modern Military Administration, Organization and Transportation" (Harding-Newman).
- "Military Organization and Administration," 1932 (Lindsell).
- "A. & Q. or Military Administration in War" (Lindsell).
- "A Study of Unit Administration" (Gale and Polden).
- "Military Law," 1932 (Banning).
- "The Defence of Duffers' Drift," 1929 (Swinton).
- "Tactical Schemes with Solutions, Series I and II" (Kirby and Kennedy).

- “Imperial Military Geography” (Cole).
- “Elements of Imperial Defence” (Boycott).
- “Changing Conditions of Imperial Defence” (Cole).
- “A Practical Digest of Military Law” (Townshend-Stephens. Pub. Sifton Praed).

VII.—Staff College Examination.—(See Staff College (Camberley) Regulations 1930, obtainable from the Manager of Publications, Delhi or Calcutta).

(a) *Campaigns.*

The following campaigns have been set for the Staff College Entrance Examination :—

Strategy of—

Napoleon's Campaign of 1796 in Italy.

Waterloo Campaign.

Peninsula Campaign up to and including the Battle of Salamanca.

The Strategy and Broad Tactical Lessons of—

The American Civil War.

Russo-Japanese War up to and including the Battle of Liao-Yang.

The Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of the War.

The East Prussian Campaign, 1914.

The Strategy and Tactics of—

The Palestine Campaign from 9th November 1917 to the end of the War.

The action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.

The 3rd Afghan War, 1919.

(b) The following books are recommended for the above campaigns :—

(i) *The Strategy of Napoleon's Campaign in Italy, 1796.*

Rise of General Bonaparte (Spencer Williamson).

Principles of War (Foch).

Vol. XI of 11th Edition of the Encyclopædia Britannica.

(ii) *The Strategy of the Waterloo Campaign, 1815.*

Six British Battles (Belloc).

Napoleon and Waterloo (Becke).

11th Edition of the Encyclopædia Britannica.

- (iii) *The Strategy of the Peninsula Campaign, up to and including the Battle of Salamanca.*

Short History of the British Army (Sheppard).

Life of Wellington (Fortescue).

- (iv) *The Strategy and Broad Tactical Lessons of the American Civil War.*

True History of the Civil War (G. C. Lee).

History of the Civil War in the United States, 1861—65 (W.

B. Woods and J. E. Edmunds).

Stonewall Jackson (G. F. R. Henderson).

Robert E. Lee, the Soldier (Maurice).

The Generalship of Ulysses S. Grant (Fuller).

Sherman (Liddell Hart).

- (v) *The Strategy and Broad Tactical Lessons of the Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).

Campaign of Liao-Yang (Rowan-Robinson).

The Japanese in Manchuria (Cordonnier).

Critical Comments only in the "Official Account: The Russo-Japanese War (Naval and Military)."

Staff Officer's Scrap Book (Ian Hamilton).

- (vi) *The Strategy and Broad Tactical Lessons of the Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of War.*

Official Histories—Military Operations, France and Belgium

Vols. I—V. Egypt and

Palestine, Vols. I and

II. Parts I and II. Galli-

poli, Vols. I and II. Meso-

potamia, Vols. I and II.

N.B.—Vol. I of the Official History of Military Operations, France and Belgium, has recently been revised.

The Great War of 1914—18 (Aston).

The Real War (Liddell Hart).

Foch (Liddell Hart).

The World Crisis (Winston Churchill).

Brief History of the Mesopotamian Campaign (Evans).

The Palestine Campaign (Wavell).

(vii) *The Strategy and Broad Tactical Lessons of the East Prussian Campaign, 1914.*

Tannenburg—First 30 Days in East Prussia (Ironside).

The World Crisis, Eastern Front, 1931 (Winston Churchill).

The Real War (Liddell Hart).

(viii) *The Strategy and Tactics of the Palestine Campaign from 9th November 1917 to the end of the War.*

The Official History, Military Operations, Egypt and Palestine, from June 17th to the end of the War, Vol. II, Parts I and II.

The Palestine Campaign (Wavell).

(ix) *The Strategy and Tactics of the action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.*

The Official History, Military Operations, France and Belgium, Vol. I. (Revised Edition.)

40 Days in 1914 (Maurice).

Liaison 1914 (E. L. Spears).

(x) *The Strategy and Tactics of the 3rd Afghan War, 1919.*

The Official Account (General Staff, India, 1926).

(c) In addition to the above, the following books are recommended for the various subjects :—

(i) *Strategy and Tactics.*

Soldiers and Statesmen (F. M. Sir W. Robertson).

Governments and War (Maurice).

British Strategy (Maurice).

Lectures on F. S. R. II (Fuller).

Lectures on F. S. R. III (Fuller).

War and Western Civilization, 1832—1932 (Fuller).

The British Way in Warfare (Liddell Hart).
Military History for the Staff College Entrance Examination
(Sheppard).
In the Wake of the Tank (Martel).
Tactical Schemes with Solutions, Series I and II (Kirby and
Kennedy).
Passing it on (Genl. Sir A. Skeen).
Report of the Dardanelles Commission.

(ii) *Organization, Administration and Transportation.*

Staff College Examination Lecture Series, 1933 (Denning) also for
(i) and (iv).
Military Organization and Administration, 1932 (Lindsell).
A. & Q. or Military Administration in War (Lindsell).
Modern Military Administration, Organization and Transportation
(Harding-Newman).
Administrative Schemes with Solutions (Kirby and Murison).
Outline of the Development of the British Army (Hastings-
Anderson).
Short History of the British Army to 1914 (Sheppard).
The Annual Army Estimates of Effective and Non-Effective
Services (H. M. S. O.).
Notes on the Land Forces of the British Dominions, Colonies,
Protectorates and Mandated Territories.
The Statesman's Year Book.
Army List.
League of Nations : Armaments Year Book, 1933.
War Office Official Handbooks of Foreign Armies.
Declaration of British Disarmament Policy, 1932.
Commonsense about Disarmament (Lefebure).

(iii) *Military Law.*

Military Law, 1932 (Banning).
A Practical Digest of Military Law (Townshend-Stephens,
Pub. Sifton Praed).

(iv) *The History and Organization of the Empire.*

Short History of the British Commonwealth (Ramsay).
Short History of British Expansion (Williamson).
British Empire (Basil Williams).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30, 1930-31, 1931-32.

Problem of the N.-W. F., 1890—1908, with a survey of policy since 1849 (Davies).

Modern Egypt (Cromer, 1908).

Egypt since Cromer, Vols. I and II (Lord Lloyd).

The History of Canada (W. L. Grant).

The Union of South Africa (R. H. Brand).

History of the Australasian Colonies (Jenks).

Imperial Military Geography (Cole).

Imperial Communications (Wakely).

Changing Conditions of Imperial Defence (Cole).

Elements of Imperial Defence (Boycott).

VIII.—Schemes, etc.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by **introducing** as many new schemes as possible. The Institution is now in possession of the complete set of schemes with solutions set at the 1933 Army Headquarters Staff College Course. These as well as *Precis of Lectures* can be supplied at annas eight per copy, plus postage. If maps are required a charge of Rs. 2 extra is charged.

In order to simplify their issue, the schemes have been classified as follows. When ordering, member are requested to give the subject of the schemes, etc., required.

STAFF COLLEGE SERIES, 1933.

(A)—Tactical Papers.

Continuous Exercise No. 1 "March Orders," with solution.

Continuous Exercise No. 2 "Operation Instructions," with solution.

Continuous Exercise No. 3 "Military Appreciation," with solution.

Continuous Exercise No. 4 "Attack Orders," with solution.

Continuous Exercise No. 5 "Defence Orders," with solution.

Strategy and Tactics—

Withdrawal Scheme.

Counter-Attack Scheme.

Attack Scheme.

Mountain Warfare Scheme.

Cavalry Exercise.

NOTE.—A number of schemes (with solutions) set for the 1932 A. H. Q. Staff College Course (referred to in the July 1933 number of the Journal) can be supplied at the same rate, *i.e.*, annas eight per copy, plus Rs. 2/- per map, if required.

(B)—Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931).

The History and Organization of the Empire (1932).

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932).

Tactical Lessons of the Great War (1932).

Cavalry, I (1932).

Cavalry, II (1932).

Artillery, I (1932).

Artillery, II (1932).

Engineers, I & II (1932).

Tactical Employment of Tanks (1932).

Chemical Warfare (1932).

Night Operations (1932).

Frontier Warfare (1932).

Air Co-operation (1932).

Military Law.

Military Law, I (1932).

Military Law, II (1932).

Military Law, III (1932).

Military Law, IV (1932).

Specimen Military Law Paper (1932).

Organization, Administration and Transportation.

Mobilization (1932).

Reinforcements in War (1932).

Organization, Administration and Transportation (Peace)—
Specimen Examination Paper with notes (1932).

Organization, Administration and Transportation (War)—Speci-
men Examination Paper (1932).

“ Q ” Services in Peace (1932).

Movements (1932).

Movements—Specimen Examination Paper (1932).

Supply of a Division in War (1932).

Supply Problem—Specimen Examination Paper (1932).

General.

Notes on Military Writing (1932).

Essay—Specimen Paper (1932).

Hints on Working for Examinations (1930).

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work, a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the Fund deem it desirable. Also the

Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but in the event of two journeys being of equal value, the man who has run the greater risk, will be considered to have the greater claim to the reward.

8. When the work of the year has either not been of sufficient value, or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS.

(With rank of officers and soldiers at the date of the Award.)

1889 .. BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

1891 .. SAWYER, Maj. H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Royal Air Force, Indian Air Force, Royal Indian Marine and the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary. U. S. I., Simla.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded
a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lt.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a
gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.
- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards
(specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.), Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneer.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N.-W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200).
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.
- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps.
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.

MACGREGOR MEMORIAL MEDALLISTS—(concl'd.).

- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
KHAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal
Garhwal Rifles.
- 1933 .. ABDUL GHAFUR, Havildar, K. G. O., Bengal Sappers
and Miners.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

(With Rank of Officers at the date of the Essay.)

- 1872 .. ROBERTS, Lt.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (specially
awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lt.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
- 1898 .. MULLALLY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially
awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.E.
- 1900 .. THUILLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E. (specially awarded a silver
medal).
- 1901 .. RANKEN, Lt.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R. F. G., R.E. (specially awarded a silver
medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.

PRIZE ESSAY GOLD MEDALLISTS—(concl'd.).

1905	..	COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
1907	..	WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908	..	JEUDWINE, Maj. H. S., R.A.
1909	..	MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry. ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
1911	..	Mr. D. PETRIE, M.A., Punjab Police.
1912	..	CARTER, Maj. B. C., The King's Regiment.
1913	..	THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
1914	..	BAINBRIDGE, Col. W. F., D.S.O., 51st Sikhs (F. F.). NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides (specially awarded a silver medal).
1916	..	CRUM, Maj. W. E., V.D., Calcutta Light Horse.
1917	..	BLAKER, Maj. W. F., R.F.A.
1918	..	GOMPERTZ, Capt. A. V., M.C., R.E.
1919	..	GOMPERTZ, Capt. M. L. A., 108th Infantry.
1920	..	KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
1922	..	MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
1923	..	KEEN, Col. F. S., D.S.O., I.A.
1926	..	DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi- ment.
1927	..	HOGG, Maj. D. MCA., M.C., R.E.
1928	..	FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
1929	..	DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi- ment.
1930	..	DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
1931	..	FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
1932	..	THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).
1933	..	Prize not awarded.

NOTICE.

(i) With effect from the 1st January 1934, members of ten years' standing who retire from the Service may continue their membership on payment of the reduced subscription of s10/6 per annum.

(ii) Cadets of the Indian Military Academy are now eligible for membership of the Institution.

(iii) Officers of the Indian States Forces are eligible to compete in the Gold Medal Prize Essay Competition.

(iv) Officers and other ranks of the Royal Air Force, Royal Indian Marine and Indian Air Force, are eligible for the award of the MacGregor Memorial Medal.

(v) The revised Library Catalogue (1934) is now available and can be supplied to members and subscribers at Rs. 2/8/- per copy, plus postage.

GOLD MEDAL PRIZE ESSAY COMPETITION, 1934.

The Council has chosen the following subjects for the Gold Medal Prize Essay Competition for 1934 :—

- (a) “ It is often said that Indians are by nature divided into what might be called martial and non-martial races. This is a mere myth..... (p. 65, Indian Military College Committee's Report).

Examine this quotation and state your own conclusions,

or

- (b) The problem of the French in dealing with the tribes on the Southern and Eastern frontiers of Morocco, in the mountainous region of the Atlas, is in many ways similar to ours on the North-West Frontier of India.

Contrast the two methods of control and administration and state in some detail what is, in your opinion, the best system of defence and control of the North-West Frontier of India (from Chitral to the Persian Frontier inclusive).

The following are the conditions of the competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force, Auxiliary Forces and Indian State Forces.
- (2) Essays must be type-written and submitted in triplicate.
- (3) When reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be strictly anonymous. Each must have a motto, and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.
- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1934.

- (6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
 - (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1934.
 - (8) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
 - (9) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.
-

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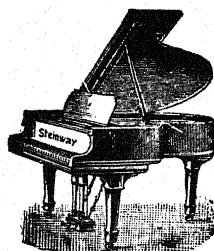
JULY 1934.

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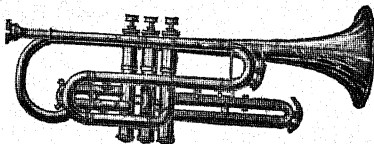
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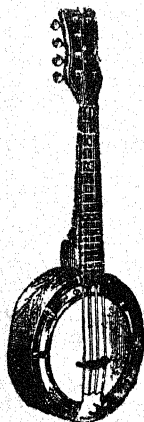
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I.—New Members.

The following new members joined the Institution from 2nd April to 31st May 1934 :—

ORDINARY MEMBERS.

Lieut.-General Sir William H. Bartholomew K.C.B., C.M.G., D.S.O.
" Sir W. Edmund Ironside, K.C.B., C.M.G., D.S.O.
Lieut.-Colonel C. Newton-Davis, M.C.
Captain H. P. L. Hutchinson.
" C. H. Smith.
" O. C. B. Smith Bingham.
Lieut. C. M. Adderley.
" L. P. Sen.
" S. C. H. Tighe.
2/Lieut. J. M. K. Bradford.
Sqd. Leader P. F. Fullard, D.S.O., M.C., A.F.C.
Flight Lieut. B. E. Embry, A.F.C.

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per copy, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary or to Messrs. L. A. Stronach & Co., Advertising Consultants, Stronach House, Ballard Estate, Bombay.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from

9 A.M. until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military, naval and service interest.

There is a well-stocked library in the Institution from which members can obtain books on loan free in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed, at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member, it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of the date of issue.

(6) If a book is not returned at the end of one month, it must be paid for if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library has been revised and is now available for sale at Rs. 2/8/- per copy, plus postage. The Library has been completely overhauled and all books re-classified, hence the new catalogue meets the general demand for an up-to-date production containing all military classics and other works likely to be of use to members of the Institution. Members who have not yet ordered their copies are advised to send a post card to the Librarian of the Institution, Simla.

V.—New Books.

BOOKS RECEIVED.

Title.	Published.	Author.	Class and No. allotted in U. S. I. of India Catalogue re- vised 1934 edition.
Smith-Dorrien	1931 ..	C. Ballard.	XVII S 20
The Suez Canal—Its Past, Present and Future.	1933 ..	Sir A. T. Wilson.	XVIII S 2
A Political Geography of the British Empire.	1933 ..	C. B. Fawcett.	XXI P 21
The Queen and Mr. Gladstone, 1898, Vol. II.	1880-1933..	Philip Guedalla.	XXII T 3
Napoleon and His Marshals	1934 ..	A. G. Macdonell.	XVII N 27
The Great Wall of India	1933 ..	Ian Hay.	XXVI G 7
Empire Unity and Defence	1934 ..	J. F. C. Fuller.	XIII E 9
Fatehgarh Camp, 1777-1857	1934 ..	C. L. Wallace.	V F 1
Freemasonry in the Royal Scots (The Royal Regiment).	1934 ..	T. R. Henderson.	..
Winter in Moscow	1934 ..	M. Muggeridge.	XXV W 13
The Fighting Cameliers	1934 ..	Frank Reid.	XIV (21) F 30
The Navy and the Next War	1934 ..	Bernard Acworth.	XI N 14.
T. E. Lawrence in Arabia and After.	1934 ..	B. L. Liddel- Hart.	XXVII L 220
How to Live in England on a Pension.	1934 ..	"Mauser."	XX H I
The Punjab Frontier Force— A Brief Record of their Services, 1846-1924.	1934 ..	R. North.	XII P 4

BOOKS ON ORDER.

Some Facts about India.	Duchess of Atholl.
Prince Eugene.	Sir George MacMunn.
Behind the Smoke Screen.	Brigadier P. H. C. Groves.
Storm of Steel.	Ernest Junger.
Four and a Half Years—A Personal Diary, 1914-16, Rt. Hon. Christopher Addison. Vol. I.	
Egypt since Cromer, Vol. II.	Lord Lloyd.
A History of Exploration-From the Earliest Times to the Present Day.	Sir Percy Sykes.

Acknowledgment.

The following old books have been presented to the Institution :—

Title.	Author and date of publication.	Presented by
1. The Military History of the late Prince Eugene of Savoy and of the late John, Duke of Marlborough, Volumes I & II.	Claude Du Bosc, 1736.	Headquarters, 6th (Lucknow) Infantry Brigade.
2. Campagne De 1815.	General Gourgaud, 1818.	Lt.-Col. M. C. Lake.

The Institution is in possession of a collection of old and rare books presented by members from time to time and, while such books are not available for circulation, they can be seen by members visiting Simla. The Secretary will be glad to acknowledge the gift of old books, trophies and medals, etc., presented to the Institution.

VI.—Promotion Examinations.

(a) *Campaigns*—(reference A. O. 243 of 1931, as amended by A. O. 80 of 1933 and A. O. 102 of 1933, as amended by A. Os. 119 and 155 of 1933 and I. A. O. 651 of 1933).

The following table shows the campaigns on which military history papers will be set for Lieutenants for promotion to Captain in sub-head *b* (iii) and for Captains for promotion to Major in sub-head *d* (iii), with a list of books recommended for the study of each:—

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
October 1934 .. March 1935	France and Belgium, 1914 ; up to and including the Aisne.	"History of the Great War—Military Operations—France and Belgium, 1914, Vol. I." Revised Edition (for Oct. 1934 and March 1935 Examinations). "Liaison 1914—A narrative of the Great Retreat." (Spears). "The Memoirs of Marshal Joffre, Vol. I." (Trans. Bentley Mott. Pub. Bles).
October 1934 .. March 1935 October 1935	Mesopotamia, up to and including the capture of Kut-al-Amara, October 1915.	"History of the Great War.—Military Operations—Mesopotamia, Vol. I." "Brief Outline of the Campaign in Mesopotamia, 1914—18" (Evans. Pub. Sifton Praed). "Tigris Gunboats" (Nunn).
October 1935 .. March 1936 October 1936	Gallipoli-Inception of the Campaign to May 1915.	"History of the Great War—Military Operations—Gallipoli, Vol. I. "Dardanelles" (Callwell). "Five Years in Turkey" (Liman Von Sanders). "The World Crisis" (Churchill).

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
March 1936 ..	Mesopotamia, from October 1915, up to and including the capture and consolidation of Baghdad, April 1917.	"History of the Great War—Military Operations—Mesopotamia, Vols. II and III." "Brief Outline of the Campaign in Mesopotamia, 1914—18" (Evans. Pub. Sifton Praed).

The campaigns set for Majors, R.A.M.C. and R.A.V.C. up to and including 1935 are published in I.A.O's. 651 of 1933 and 25 of 1934.

(b) *Other Subjects.*

In addition to the manuals and regulations mentioned in K. R. and R. A. I., the following books are recommended :—

- "Modern Military Administration, Organization and Transportation" (Harding-Newman).
- "Military Organization and Administration," 1932 (Lindsell).
- "A. & Q. or Military Administration in War" (Lindsell).
- "A Study of Unit Administration" (Gale and Polden).
- "Military Law," 1932 (Banning).
- "The Defence of Duffers' Drift," 1929 (Swinton).
- "Tactical Schemes with Solutions, Series I and II" (Kirby and Kennedy).
- "Elementary Tactics or the Art of War, British School," Vol. I. (Pakenham-Walsh).
- "Imperial Military Geography" (Cole).
- "Elements of Imperial Defence" (Boycott).
- "Changing Conditions of Imperial Defence" (Cole).
- "A Practical Digest of Military Law" (Townshend-Stephens. Pub. Sifton Praed).

VII.—Staff College Examination.—(See Staff College (Camberley) Regulations 1930, obtainable from the Manager of Publications, Delhi or Calcutta).

(a) *Campaigns.*

The following campaigns have been set for the Staff College Entrance Examination :—

- Strategy of—
- Napoleon's Campaign of 1796 in Italy.
- Waterloo Campaign.

Peninsula Campaign up to and including the Battle of Salamanca.
The Strategy and Broad Tactical Lessons of—

The American Civil War.

Russo-Japanese War up to and including the Battle of Liao-Yang.

The Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of the War.

The East Prussian Campaign, 1914.

The Strategy and Tactics of—

The Palestine Campaign from 9th November 1917 to the end of the War.

The action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.

The 3rd Afghan War, 1919.

(b) The following books are recommended for the above campaigns:—

(i) *The Strategy of Napoleon's Campaign in Italy, 1796.*

Rise of General Bonaparte (Spencer Williamson).

Principles of War (Foch).

Vol. XI of 11th Edition of the *Encyclopædia Britannica*.

(ii) *The Strategy of the Waterloo Campaign, 1815.*

Six British Battles (Belloc).

Napoleon and Waterloo (Becke).

11th Edition of the *Encyclopædia Britannica*.

(iii) *The Strategy of the Peninsula Campaign, up to and including the Battle of Salamanca.*

Short History of the British Army (Sheppard).

Life of Wellington (Fortescue).

(iv) *The Strategy and Broad Tactical Lessons of the American Civil War.*

True History of the Civil War (G. C. Lee).

History of the Civil War in the United States, 1861—65
(W. B. Woods and J. E. Edmunds).

Stonewall Jackson (G. F. R. Henderson).

Robert E. Lee, the Soldier (Maurice).

The Generalship of Ulysses S. Grant (Fuller).

Sherman (Liddell Hart).

- (v) *The Strategy and Broad Tactical Lessons of the Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).

Campaign of Liao-Yang (Rowan-Robinson).

The Japanese in Manchuria (Cordonnier).

Critical Comments only in the "Official Account: The Russo-Japanese War (Naval and Military)."

Staff Officer's Scrap Book (Ian Hamilton).

- (vi) *The Strategy and Broad Tactical Lessons of the Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of War.*

Official Histories—Military Operations, France and Belgium
Vols. I—V. Egypt and
Palestine, Vols. I and
II, Parts I and II. Galli-
poli, Vols. I and II. Meso-
potamia, Vols. I and II.

N.B.—Vol. I of the Official
History of Military
Operations, France and
Belgium, has recently
been revised.

The Great War of 1914—18 (Aston).

The Real War (Liddell Hart).

Foch (Liddell Hart).

The World Crisis (Winston Churchill).

Brief History of the Mesopotamian Campaign (Evans).

The Palestine Campaign (Wavell).

(vii) *The Strategy and Broad Tactical Lessons of the East Prussian Campaign, 1914.*

Tannenburg—First 30 Days in East Prussia (Ironsides).

The World Crisis, Eastern Front, 1931 (Winston Churchill).

The Real War (Liddell Hart).

(viii) *The Strategy and Tactics of the Palestine Campaign from 9th November 1917 to the end of the War.*

The Official History, Military Operations, Egypt and Palestine, from June 17th to the end of the War, Vol. II, Parts I and II.

The Palestine Campaign (Wavell).

(ix) *The Strategy and Tactics of the action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.*

The Official History, Military Operations, France and Belgium, Vol. I. (Revised Edition.)

40 Days in 1914 (Maurice).

Liaison 1914 (E. L. Spears).

(x) *The Strategy and Tactics of the 3rd Afghan War, 1919.*

The Official Account (General Staff, India, 1926).

(c) In addition to the above, the following books are recommended for the various subjects:—

(i) *Strategy and Tactics.*

Soldiers and Statesmen (F. M. Sir W. Robertson).

Governments and War (Maurice).

British Strategy (Maurice).

Lectures on F. S. R. II (Fuller).

Lectures on F. S. R. III (Fuller).

War and Western Civilization, 1832—1932 (Fuller).

The British Way in Warfare (Liddell Hart).

Military History for the Staff College Entrance Examination (Sheppard).

In the Wake of the Tank (Martel).

Tactical Schemes with Solutions, Series I and II (Kirby and Kennedy).

Elementary Tactics —An Introduction to the Art of War, British School, Vol. II (Pakenham-Walsh and Dorman-Smith).

Passing it on (Genl. Sir A. Skeen).

Report of the Dardanelles Commission.

(ii) *Organization, Administration and Transportation.*

Staff College Examination Lecture Series, 1933 (Denning) also for
(i) and (iv).

Military Organization and Administration, 1932 (Lindsell).

A. & Q. or Military Administration in War (Lindsell).

Modern Military Administration, Organization and Transportation (Harding-Newman).

Administrative Schemes with Solutions (Kirby and Murison).

Outline of the Development of the British Army (Hastings-Anderson).

Short History of the British Army to 1914 (Sheppard).

The Annual Army Estimates of Effective and Non-Effective Services (H. M. S. O.).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

League of Nations : Armaments Year Book, 1933.

War Office Official Handbooks of Foreign Armies.

Declaration of British Disarmament Policy, 1932.

Commonsense about Disarmament (Lefebure).

(iii) *Military Law.*

Military Law, 1932 (Banning).

A Practical Digest of Military Law (Townshend-Stephens, Pub. Sifton Praed).

(iv) *The History and Organization of the Empire.*

Short History of the British Commonwealth (Ramsay).

Short History of British Expansion (Williamson).

British Empire (Basil Williams).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30, 1930-31, 1931-32.

Problem of the N.-W. F., 1890—1908, with a survey of policy since 1849 (Davies).

Modern Egypt (Cromer, 1908).

Egypt since Cromer, Vols. I and II (Lord Lloyd).

The History of Canada (W. L. Grant).

The Union of South Africa (R. H. Brand).

History of the Australasian Colonies (Jenks).

Imperial Military Geography (Cole).

Imperial Communications (Wakely).

Changing Conditions of Imperial Defence (Cole).

Elements of Imperial Defence (Boycott).

VIII.—Schemes, etc.

Efforts are being made to compete with demands for tactical schemes from officers working for the Staff College Examination by introducing as many new schemes as possible. The Institution is now in possession of the complete set of schemes with solutions set at the 1933 Army Headquarters Staff College Course. These as well as *Precis of Lectures* can be supplied at annas eight per copy, plus postage. If maps are required a charge of Rs. 2 extra per map is made.

In order to simplify their issue, the schemes have been classified as follows. When ordering, members are requested to give the subject of the schemes, etc. required.

STAFF COLLEGE SERIES, 1933.

(A)—Tactical Papers.

Continuous Exercise No. 1 "March Orders," with solution.

Continuous Exercise No. 2 "Operation Instructions," with solution.

Continuous Exercise No. 3 "Military Appreciation," with solution.

Continuous Exercise No. 4 "Attack Orders," with solution.

Continuous Exercise No. 5 "Defence Orders," with solution.

Strategy and Tactics—

Withdrawal Scheme.

Counter-Attack Scheme.

Attack Scheme.

Mountain Warfare Scheme.

Cavalry Exercise.

NOTE.—A number of schemes (with solutions) set for the 1932 A. H. Q. Staff College Course (referred to in the July 1933 number of the Journal) can be supplied at the same rate, *i.e.*, annas eight per copy, plus Rs. 2/- per map, if required.

(B)—Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931).

The History and Organization of the Empire (1932).

Tactical.

Military Evolution and the Influence of Modern Inventions on Warfare (1932).

Tactical Lessons of the Great War (1932).

Cavalry, I (1932).

Cavalry, II (1932).

Artillery, I (1932).

Artillery, II (1932).

Engineers, I & II (1932).

Tactical Employment of Tanks (1932).

Chemical Warfare (1932).

Night Operations (1932).

Frontier Warfare (1932).

Air Co-operation (1932).

Military Law.

Military Law, I (1932).

Military Law, II (1932).

Military Law, III (1932).

Military Law, IV (1932).

Specimen Military Law Paper (1932).

Organization, Administration and Transportation.

Mobilization (1932).

Reinforcements in War (1932).

Organization, Administration and Transportation (Peace)—
Specimen Examination Paper with notes (1932).

Organization, Administration and Transportation (War)—Specimen Examination Paper (1932).

"Q" Services in Peace (1932).

Movements (1932).

Movements—Specimen Examination Paper (1932).

Supply of a Division in War (1932).

Supply Problem—Specimen Examination Paper (1932).

General.

Notes on Military Writing (1932).

Essay—Specimen Paper (1932).

Hints on Working for Examinations (1930).

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army *List* pages, at the rate of Rs. 2 per type-written page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

(a) For officers—British or Indian—silver medal.

(b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work, a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the Fund deem it desirable. Also the

Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but, in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

8. When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS.

(With rank of officers and soldiers at the date of the Award.)

- 1889 .. BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).
- 1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.
- 1891 .. SAWYER, Maj. H. A., 45th Sikhs.
- RAMZAN KHAN, Havildar, 3rd Sikhs.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Royal Air Force, Indian Air Force, Royal Indian Marine and the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded
a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lt.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a
gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.
- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards
(specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.), Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N.-W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200).
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.
- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps.
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.

MACGREGOR MEMORIAL MEDALLISTS—(concl'd.).

- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal
Garhwal Rifles.
- 1933 .. ABDUL GHAFUR, Havildar, K. G. O., Bengal Sappers
and Miners.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

(With Rank of Officers at the date of the Essay.)

- 1872 .. ROBERTS, Lt.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (specially
awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lt.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
- 1898 .. MULLALY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially
awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.E.
- 1900 .. THUILLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E. (specially awarded a silver
medal).
- 1901 .. RANKEN, Lt.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R. F. G., R.E. (specially awarded a silver
medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.

PRIZE ESSAY GOLD MEDALLISTS—(concl'd.).

- 1905 .. COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
- 1907 .. WOOD, Maj. E. J. M., 99th Deccan Infantry.
- 1908 .. JEUDWINE, Maj. H. S., R.A.
- 1909 .. MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry.
ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially
awarded a silver medal).
- 1911 .. Mr. D. PETRIE, M.A., Punjab Police.
- 1912 .. CARTER, Maj. B. C., The King's Regiment.
- 1913 .. THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
- 1914 .. BAINBRIDGE, Col. W. F., D.S.O., 51st Sikhs (F. F.).
NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides
(specially awarded a silver medal).
- 1916 .. CRUM, Maj. W. E., V.D., Calcutta Light Horse.
- 1917 .. BLAKER, Maj. W. F., R.F.A.
- 1918 .. GOMPERTZ, Capt. A. V., M.C., R.E.
- 1919 .. GOMPERTZ, Capt. M. L. A., 108th Infantry.
- 1920 .. KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
- 1922 .. MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
- 1923 .. KEEN, Col. F. S., D.S.O., I.A.
- 1926 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi-
ment.
- 1927 .. HOGG, Maj. D. McA., M.C., R.E.
- 1928 .. FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
- 1929 .. DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi-
ment.
- 1930 .. DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
- 1931 .. FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
- 1932 .. THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).
- 1933 .. Medal not awarded.

NOTICE.

(i) With effect from the 1st January 1934, members of ten years' standing who retire from the Service may continue their membership on payment of the reduced subscription of £10/6 per annum.

(ii) Cadets of the Indian Military Academy are now eligible for membership of the Institution.

(iii) Officers of the Indian States Forces are eligible to compete in the Gold Medal Prize Essay Competition.

(iv) The revised Library Catalogue (1934) is now available and can be supplied to members and subscribers at Rs. 2/8/- per copy, plus postage.

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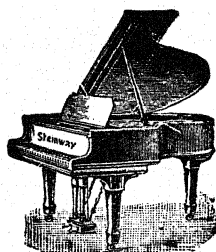
OCTOBER 1934.

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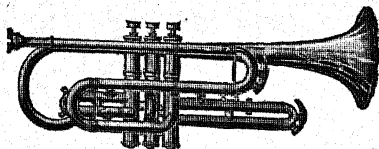
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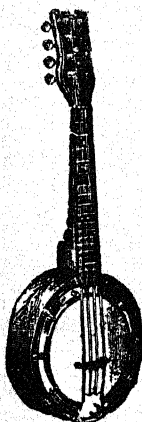
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BOMBAY.

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I.—New Members.

The following new members joined the Institution from 1st June to 31st August 1934 :—

LIFE MEMBER.

Captain R. S. Pain.

ORDINARY MEMBERS.

The Hon'ble Sir James Grigg, K.C.B.

B. C. Burt, Esq., C.I.E., M.B.E.

R. G. Daubeney, Esq.

F. H. duHeaume, Esq., O.B.E.

D. Kilburn, Esq.

Major A. H. Mackie.

Captain T. I. Bowers, M.C.

Captain C. Harford.

Captain C. A. Richardson.

Captain T. Rigby, M. C.

Captain M. C. B. Steele.

Captain W. E. Underhill.

Lieut. M. W. Hares.

Lieut. J. P. C. Mackinlay.

Lieut. C. H. O'Reilly.

Lieut. O. C. B. St. John.

2/Lieut. J. S. Bolton.

Wing Commander D. G. Donald, D.F.C., A.F.C.

II.—The Journal.

The Institution publishes a Quarterly Journal in the months of January, April, July and October, which is issued postage free to members in any part of the world. Non-members may obtain the Journal at Rs. 2 annas 8 per copy, or Rs. 10 per annum. Advertisement rates may be obtained on application to the Secretary or to Messrs. L. A. Stronach & Co., Advertising Consultants, Stronach House, Ballard Estate, Bombay.

III.—Contributions to the Journal.

Articles may vary in length from two thousand to ten thousand words. Payment is made on publication at from Rs. 40 to Rs. 100 in accordance with the value and length of the contribution.

With reference to Regulations for the Army in India, paragraph 204 and King's Regulations, paragraph 522, action to obtain the sanction of His Excellency the Commander-in-Chief to the publication of any article in the Journal of the United Service Institution of India will be taken by the Executive Committee of the Institution.

The Committee reserve to themselves the right to omit any matter which they consider objectionable.

Articles are only accepted on these conditions.

IV.—Reading Room and Library.

The United Service Institution of India is situated in the Mall, Simla, and is open all the year round—including Sundays—from 9 A.M. until sunset. The Reading Room of the Institution is provided with the leading illustrated papers, newspapers, magazines and journals of military, naval and service interest.

There is a well-stocked library in the Institution from which members can obtain books on loan free in accordance with the following rules :—

(1) The Library is only open to members and honorary members, who are requested to look upon books as not transferable to their friends.

(2) No book shall be taken from the Library without making the necessary entry in the register. Members residing permanently or temporarily in Simla are requested to enter their addresses.

(3) A member shall not be allowed, at one time, more than three books or sets of books.

(4) No particular limit is set as to the number of days for which a member may keep a book, the Council being desirous of making the Library as useful as possible to members ; but if after the expiration of a fortnight from date of issue it is required by any other member, it will be re-called.

(5) Applications for books from members at out-stations are dealt with as early as possible and books are despatched post free per Registered Parcel Post. They must be returned carefully packed per Registered Parcel Post within one month of the date of issue.

(6) If a book is not returned at the end of one month, it must be paid for if so required by the Executive Committee. Lost and defaced books shall be replaced at the cost of the member to whom they were issued. In the case of lost books which are out of print, the value shall be fixed by the Executive Committee and the amount, when received, spent in the purchase of a new book.

(7) The issue of a book under these rules to any member implies the latter's compliance with the rules and the willingness to have them enforced, if necessary, against him.

(8) The catalogue of the Library has been revised and is now available for sale at Rs. 2/8/- per copy, plus postage. The Library has been completely overhauled and all books re-classified, hence the new catalogue meets the general demand for an up-to-date production containing all military classics and other works likely to be of use to members of the Institution. Members who have not yet ordered their copies are advised to send a post card to the Librarian of the Institution, Simla.

V.—New Books.

BOOKS RECEIVED.

Title.	Published.	Author.	Class.	Catalogue No.
Prince Eugene, Twin Marshal with Marlborough.	1934.	Sir G. MacMunn	.. XVII	E4
Behind the Smoke Screen ..	1934.	Brig. P. H. C. Groves	.. I	B2
The Storm of Steel ..	1930.	Ernest Junger	XIV (21)	S28
Four and a half Years—A Personal Diary, 1914-16, Vol. I.	1934.	Rt. Hon. Christopher Addison.	XIV (21)	F31
Egypt Since Cromer, Vol. II ..	1934.	Lord Lloyd	.. XXV	E16
A History of Exploration—From the Earliest Times to the Present Day.	1934.	Sir P. Sykes	.. XXVI	H12
The Living India ..	1934.	Sir G. MacMunn	.. XXV /	L16
Tigris Gunboats ..	1932.	Vice-Admiral W. Nunn	XIV (21)	T24
Rise and Fulfilment of British Rule in India.	1934.	E. Thompson and G. T. Garratt.	XXI	R17
England their England ..	1934.	A. G. Macdonell	.. XXII	E5
Lawrence of Lucknow ..	1934.	J. L. Morison	.. XVII	L21
Forty-four Years a Public Servant.	1934.	C. A. Kincaid	.. XVII	K7
A History of the Great War, 1914-18.	1934.	Liddell Hart	.. XIV (21)	H17
Imperial Policing ..	1934.	Sir C. W. Gwynn	.. XIII	I 9
Official History, War in the Air, Vol. IV.	1934.	H. A. Jones	.. XIV (21)	W4
The Royal Air Force—A Concise History.	1934.	Capt. A. O. Pollard	.. I	T 4
Curzon : The Last Phase, 1919-1925.	1934.	Harold Nicolson,	.. XVII	C36
An Outline of the Principles of War.	1934.	Lt.-Col. R. A. E. Voysey	X	A6
The Under-world of India ..	1932.	Sir G. MacMunn	.. XXII	U1

BOOKS ON ORDER.

Red Road Through Asia.	B. Goldman.
Will War Come in Europe.	Knickerbocker.
The Consequences of the War to Great Britain.	H. W. Hirst.

The Institution is in possession of a collection of old and rare books presented by members from time to time and, while such books are not available for circulation, they can be seen by members visiting Simla. The Secretary will be glad to acknowledge the gift of old books, trophies and medals, etc., presented to the Institution.

VI.—Promotion Examinations.

(a) *Campaigns*—(reference A. O. 243 of 1931, as amended by A. O. 80 of 1933 and A. O. 102 of 1933, as amended by A. Os. 119 and 155 of 1933 and I. A. O. 651 of 1933).

The following table shows the campaigns on which military history papers will be set for Lieutenants for promotion to Captain in sub-head *b* (iii) and for Captains for promotion to Major in sub-head *d* (iii), with a list of books recommended for the study of each :—

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
March 1935	France and Belgium, 1914 ; up to and including the Aisne.	<p>"History of the Great War—Military Operations—France and Belgium, 1914, Vol. I." Revised Edition (for March 1935 Examination).</p> <p>"Liaison 1914—A narrative of the Great Retreat." (Spears.) "The Memoirs of Marshal Joffre, Vol. I." (Trans. Bentley Mott. Pub. Bles.)</p>
March 1935 October 1935	.. Mesopotamia, up to and including the capture of Kut-al-Amara, October 1915.	<p>"History of the Great War.—Military Operations—Mesopotamia, Vol. I."</p> <p>"Brief Outline of the Campaign in Mesopotamia, 1914—18" (Evans. Pub. Sifton Praed). "Tigris Gunboats" (Nunn).</p>
October 1935 March 1936 October 1936	.. Gallipoli-Inception of the Campaign to May 1915.	<p>"History of the Great War—Military Operations—Gallipoli, Vol. I. "Dardanelles" (Callwell).</p> <p>"Five Years in Turkey" (Liman Von Sanders). "The World Crisis" (Churchill).</p> <p>Notes and Comments on the Dardanelles Campaign (A. Kearsey).</p>

<i>Dates of Examination.</i>	<i>Campaigns.</i>	<i>Books recommended.</i>
March 1936 ..	Mesopotamia, from Octo-	"History of the Great
October 1936	ber 1915, up to and in-	War—Military Opera-
March 1937	cluding the capture and	tions — Mesopotamia,
	consolidation of Bagh-	Vols. II and III."
	dad, April 1917.	"Brief Outline of the
		Campaign in Mesopota-
		mia, 1914—18" (Evans.
		Pub. Sifton Praed).

The campaigns set for Majors, R.A.M.C. and R.A.V.C. up to and including 1935 are published in I.A.O's. 651 of 1933 and 25 of 1934.

(b) Other Subjects.

In addition to the manuals and regulations mentioned in K. R. and R. A. I., the following books are recommended :—

- "Modern Military Administration, Organization and Transportation" (Harding-Newman).
- "Military Organization and Administration," 1932 (Lindsell).
- "A. & Q. or Military Administration in War" (Lindsell).
- "A Study of Unit Administration" (Gale and Folden).
- "Military Law," 1932 (Banning).
- "The Defence of Duffers' Drift," 1929 (Swinton).
- "Tactical Schemes with Solutions, Series I and II" (Kirby and Kennedy).
- "Elementary Tactics or the Art of War, British School," Vol. I. (Pakenham-Walsh).
- "Imperial Military Geography" (Cole).
- "Elements of Imperial Defence" (Boycott).
- "Changing Conditions of Imperial Defence" (Cole).
- "A Practical Digest of Military Law" (Townshend-Stephens. Pub. Sifton Praed).

VII.—Staff College Examination.—(See Staff College (Camberley) Regulations 1930, obtainable from the Manager of Publications, Delhi or Calcutta).

(a) Campaigns.

The following campaigns have been set for the Staff College Entrance Examination :—

Strategy of—

Napoleon's Campaign of 1796 in Italy.

Waterloo Campaign.

Peninsula Campaign up to and including the Battle of Salamanca.

The Strategy and Broad Tactical Lessons of—

The American Civil War.

Russo-Japanese War up to and including the Battle of Liao-Yang.

The Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of the War.

The East Prussian Campaign, 1914.

The Strategy and Tactics of—

The Palestine Campaign from 9th November 1917 to the end of the War.

The action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.

The 3rd Afghan War, 1919.

(b) The following books are recommended for the above campaigns :—

(i) *The Strategy of Napoleon's Campaign in Italy, 1796.*

Rise of General Bonaparte (Spencer Williamson).

Principles of War (Foch).

Vol. XI of 11th Edition of the Encyclopædia Britannica.

(ii) *The Strategy of the Waterloo Campaign, 1815.*

Six British Battles (Belloc).

Napoleon and Waterloo (Becke).

11th Edition of the Encyclopædia Britannica.

(iii) *The Strategy of the Peninsula Campaign, up to and including the Battle of Salamanca.*

Short History of the British Army (Sheppard).

Life of Wellington (Fortescue).

(iv) *The Strategy and Broad Tactical Lessons of the American Civil War.*

True History of the Civil War (G. C. Lee).

History of the Civil War in the United States, 1861—65
(W. B. Woods and J. E. Edmunds).

Stonewall Jackson (G. F. R. Henderson).

Robert E. Lee, the Soldier (Maurice).

The Generalship of Ulysses S. Grant (Fuller).

Sherman (Liddell Hart).

- (v) *The Strategy and Broad Tactical Lessons of the Russo-Japanese War, 1904, up to and including the Battle of Liao-Yang.*

Lectures on the Strategy of the Russo-Japanese War (Bird).

Campaign of Liao-Yang (Rowan-Robinson).

The Japanese in Manchuria (Cordonnier).

Critical Comments only in the "Official Account: The Russo-Japanese War (Naval and Military)."

Staff Officer's Scrap Book (Ian Hamilton).

- (vi) *The Strategy and Broad Tactical Lessons of the Great War in France, Belgium, Mesopotamia, the Dardanelles and Palestine, including a knowledge of the influence on the strategy in these areas of the events in other theatres of War.*

Official Histories—Military Operations, France and Belgium
Vols. I—V. Egypt and Palestine, Vols. I and II, Parts I and II. Gallipoli, Vols. I and II. Mesopotamia, Vols. I and II.

N.B.—Vol. I of the Official History of Military Operations, France and Belgium, has recently been revised.

The Great War of 1914—18 (Aston).

The Real War (Liddell Hart).

Foch (Liddell Hart).

The World Crisis (Winston Churchill).

Brief History of the Mesopotamian Campaign (Evans).

The Palestine Campaign (Wavell).

Notes and Comments on the Dardanelles Campaign (A. Kearsey).

(vii) *The Strategy and Broad Tactical Lessons of the East Prussian Campaign, 1914.*

Tannenburg—First 30 Days in East Prussia (Ironside).

The World Crisis, Eastern Front, 1931 (Winston Churchill).

The Real War (Liddell Hart).

(viii) *The Strategy and Tactics of the Palestine Campaign from 9th November 1917 to the end of the War.*

The Official History, Military Operations, Egypt and Palestine, from June 17th to the end of the War, Vol. II, Parts I and II.

The Palestine Campaign (Wavell).

(ix) *The Strategy and Tactics of the action of the British Expeditionary Force in France and Belgium up to and including the Battle of the Aisne.*

The Official History, Military Operations, France and Belgium, Vol. I. (Revised Edition.)

40 Days in 1914 (Maurice).

Liaison, 1914 (E. L. Spears).

(x) *The Strategy and Tactics of the 3rd Afghan War, 1919.*

The Official Account (General Staff, India, 1926).

(c) In addition to the above, the following books are recommended for the various subjects :—

(i) *Strategy and Tactics.*

Soldiers and Statesmen (F. M. Sir W. Robertson).

Governments and War (Maurice).

British Strategy (Maurice).

Lectures on F. S. R. II (Fuller).

Lectures on F. S. R. III (Fuller).

War and Western Civilization, 1832—1932 (Fuller).

The British Way in Warfare (Liddell Hart).

Military History for the Staff College Entrance Examination (Sheppard).

In the Wake of the Tank (Martel).

Tactical Schemes with Solutions, Series I and II (Kirby and Kennedy).

Elementary Tactics—An Introduction to the Art of War, British School, Vol. II (Pakenham-Walsh and Dorman-Smith).

Passing it on (Genl. Sir A. Skeen).

Report of the Dardanelles Commission.

(ii) Organization, Administration and Transportation.

Staff College Examination Lecture Series, 1933 (Denning) also for
(i) and (iv).

Military Organization and Administration, 1932 (Lindsell).

A. & Q. or Military Administration in War (Lindsell).

Modern Military Administration, Organization and Transportation (Harding-Newman).

Administrative Schemes with Solutions (Kirby and Murison).

Outline of the Development of the British Army (Hastings-Anderson).

Short History of the British Army to 1914 (Sheppard).

The Annual Army Estimates of Effective and Non-Effective Services (H. M. S. O.).

Notes on the Land Forces of the British Dominions, Colonies, Protectorates and Mandated Territories.

The Statesman's Year Book.

Army List.

League of Nations: Armaments Year Book, 1933.

War Office Official Handbooks of Foreign Armies.

Declaration of British Disarmament Policy, 1932.

Commonsense about Disarmament (Lefebure).

(iii) Military Law.

Military Law, 1932 (Banning).

A Practical Digest of Military Law (Townshend-Stephens,
Pub. Sifton Praed).

(iv) The History and Organization of the Empire.

Short History of the British Commonwealth (Ramsay).

Short History of British Expansion (Williamson).

British Empire (Basil Williams).

General Survey of the History of India (Sir Verney Lovett).

India in 1929-30, 1930-31, 1931-32.

Problem of the N.-W. F., 1890—1908, with a survey of policy since 1849 (Davies).

Modern Egypt (Cromer, 1908).

Egypt since Cromer, Vols. I and II (Lord Lloyd).

The History of Canada (W. L. Grant).

The Union of South Africa (R. H. Brand).

History of the Australasian Colonies (Jenks).

Imperial Military Geography (Cole).

Imperial Communications (Wakely).

Changing Conditions of Imperial Defence (Cole).

Elements of Imperial Defence (Boycott).

VIII.—Schemes, etc.

The institution is in possession of the tactical schemes, complete with solutions and maps, set at the Army Headquarters Staff College Course for the past three years and also a number of precis of lectures. These papers are very useful to officers studying for the Staff College Course examination and are available for issue to members of the Institution at the nominal price of annas eight per copy, plus postage. The cost of maps is extra and is charged for at Rs. 2 per map.

In order to simplify their issue, the schemes have been classified as follows. When ordering members are requested to give the subject of the schemes, etc., required.

STAFF COLLEGE SERIES, 1932.

Tactical Schemes.

Continuous Exercises.

- No. 1. "Message Writing."
- „ 2. "Order Writing."
- „ 3. "Advance Guards."
- „ 4. "Appreciation."
- „ 5. "Attack Orders."
- „ 6. "Defence."
- „ 7. "Defence."

Strategy and Tactics.

Strategy and Tactics Paper No. 1.

„ „ „ „ No. 2.

„ „ „ „ No. 3.

Tactical Exercise—Night Withdrawals.

Cavalry Exercise.

Mountain Warfare Scheme.

Precis of Lectures, etc.

Military History.

The East Prussian Campaign, 1914 (1931).
The History and Organisation of the Empire.

Tactical.

Military Evolution and the influence of modern Inventions on Warfare.

Tactical lessons of the Great War.

Cavalry I.

Cavalry II.

Artillery I.

Artillery II.

Engineers I and II.

Tactical Employment of Tanks.

Chemical Warfare.

Night Operations.

Frontier Warfare.

Air Co-operation.

Military Law.

Military Law I.

Military Law II.

Military Law III.

Military Law IV.

Specimen Military Law Paper.

Organization, Administration and Transportation.

Mobilization.

Reinforcements in War.

Organization, Administration and Transportation (Peace)—

Specimen Examination Paper.

Organization, Administration and Transportation (War)—

Specimen Examination Paper.

" Q " Services in Peace.

Movements.

Movements—Specimen Examination Paper.

Supply of a Division in War.

Supply Problem—Specimen Examination Paper.

General.

Notes on Military Writing.

Essay—Specimen Paper.

STAFF COLLEGE SERIES, 1933.

Tactical Schemes.

Continuous Exercises.

No. 1. " March Orders."

No. 2. " Operation Instructions."

Continuous Exercises.

- No. 3. "Military Appreciation."
- No. 4. "Attack Orders."
- No. 5. "Defence Orders."

Strategy and Tactics.

Withdrawal Scheme.
 Counter-Attack Scheme.
 Attack Scheme.
 Mountain Warfare Scheme.
 Cavalry Exercise.

STAFF COLLEGE SERIES, 1934.

Tactical Schemes.*Continuous Exercises.*

- No. 1. "March Orders."
- No. 2. "Military Appreciation."
- No. 3. "Attack Orders."
- No. 4. "Defence Orders."

Strategy and Tactics.

S. & T. Paper No. 1.
 S. & T. Paper No. 2.
 S. & T. Paper No. 3. "Night Attacks."
 S. & T. Paper No. 4. "Mountain Warfare Scheme."
 Withdrawal Exercise.
 Cavalry Exercise.

IX.—Historical Research.

The U. S. I. is prepared to supply members and units with type-written copies of old Indian Army List pages, at the rate of Rs. 2 per typewritten page.

The staff of the Institution is always willing to assist units, authors of regimental histories and members by searching the many old military records in the Library on their behalf.

X.—The MacGregor Memorial Medal.

1. The MacGregor Memorial Medal was founded in 1888 as a memorial to the late Major-General Sir Charles MacGregor. The medals are awarded for the best military reconnaissances or journeys of exploration of the year.

2. The following awards are made annually in the month of June :—

- (a) For officers—British or Indian—silver medal.
- (b) For soldiers—British or Indian—silver medal with Rs. 100 gratuity.

3. For especially valuable work, a gold medal may be awarded in place of one of the silver medals, or in addition to the silver medals, whenever the administrators of the Fund deem it desirable. Also the Council may award a special additional silver medal, without gratuity, to a soldier, for especially good work.

4. The award of medals is made by His Excellency the Commander-in-Chief, as Vice-Patron, and the Council of the United Service Institution, who were appointed administrators of the Fund by the MacGregor Memorial Committee.

5. Only officers and soldiers belonging to the Army in India (including those in civil employ) are eligible for the award of the medal.*

6. The medal may be worn in uniform by Indian soldiers on ceremonial parades, suspended round the neck by the ribbon issued with the medal.†

7. Personal risk to life during the reconnaissance or exploration is not a necessary qualification for the award of the medal; but, in the event of two journeys being of equal value, the man who has run the greater risk will be considered to have the greater claim to the reward.

8. When the work of the year has either not been of sufficient value or has been received too late for consideration before the Council Meeting, the medal may be awarded for any reconnaissance during previous years considered by His Excellency the Commander-in-Chief to deserve it.

MACGREGOR MEMORIAL MEDALLISTS

(With rank of officers and soldiers at the date of the Award.)

1889 .. BELL, Col. M. S., V.C., R.E. (specially awarded a gold medal).

1890 .. YOUNGHUSBAND, Capt. F. E., King's Dragoon Guards.

1891 .. SAWYER, Maj. H. A., 45th Sikhs.

RAMZAN KHAN, Havildar, 3rd Sikhs.

* N.B.—The terms "officer" and "soldier" include those serving in the British and Indian armies and their reserves, also those serving in Auxiliary Forces, such as the Indian Auxiliary and Territorial Forces and Corps under Local Governments, Frontier Militia, Levies and Military Police, also all ranks serving in the Royal Air Force, Indian Air Force, Royal Indian Marine and the Indian States Forces.

† Replacements of the ribbon may be obtained on payment from the Secretary, U. S. I., Simla.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1892 .. VAUGHAN, Capt. H. B., 7th Bengal Infantry.
JAGGAT SINGH, Havildar, 19th Punjab Infantry.
- 1893 .. BOWER, Capt. H., 17th Bengal Cavalry (specially awarded
a gold medal).
FAZAL DAD KHAN, Dafadar, 17th Bengal Cavalry.
- 1894 .. O'SULLIVAN, Maj. G. H. W., R.E.
MULL SINGH, Sowar, 6th Bengal Cavalry.
- 1895 .. DAVIES, Capt. H. R., Oxfordshire Light Infantry.
GANGA DYAL SINGH, Havildar, 2nd Rajputs.
- 1896 .. COCKERILL, Lieut. G. K., 28th Punjab Infantry.
GHULAM NABI, Sepoy, Q. O. Corps of Guides.
- 1897 .. SWAYNE, Capt. E. J. F., 10th Rajput Infantry.
SHAHZAD MIR, Dafadar, 11th Bengal Lancers.
- 1898 .. WALKER, Capt. H. B., Duke of Cornwall's Light Infantry.
ADAM KHAN, Havildar, Q. O. Corps of Guides.
- 1899 .. DOUGLAS, Capt. J. A., 2nd Bengal Lancers.
MIHR DIN, Naik, Bengal Sappers and Miners.
- 1900 .. WINGATE, Capt. A. W. S., 14th Bengal Lancers.
GURDIT SINGH, Havildar, 45th Sikhs.
- 1901 .. BURTON, Maj. E. B., 17th Bengal Lancers.
SUNDAR SINGH, Colour Havildar, 31st Burmah Infantry.
- 1902 .. RAY, Capt. M. R. E., 7th Rajput Infantry.
TILBIR BHANDARI, Havildar, 9th Gurkha Rifles.
- 1903 .. MANIFOLD, Lt.-Col. C. C., I.M.S.
GHULAM HUSSAIN, Lance-Dafadar, Q. O. Corps of Guides.
- 1904 .. FRASER, Capt. L. D., R.G.A.
MOGHAL BAZ, Dafadar, Q. O. Corps of Guides.
- 1905 .. RENNICK, Maj. F., 40th Pathans (specially awarded a
gold medal).
MADHO RAM, Havildar, 8th Gurkha Rifles.
- 1906 .. SHAHZADA AHMAD MIR, Risaldar, 36th Jacob's Horse.
GHAFUR SHAH, Lance-Naik, Q. O. Corps of Guides.
- 1907 .. NANGLE, Capt. M. C., 92nd Punjabis.
SHEIKH USMAN, Havildar, 103rd Mahratta Light Infantry.
- 1908 .. GIBBON, Capt. C. M., Royal Irish Fusiliers.
MALANG, Havildar, 56th Punjab Rifles.
- 1909 .. MUHAMMAD RAZA, Havildar, 106th Pioneers.
- 1910 .. SYKES, Maj. P. M., C.M.G., late 2nd Dragoon Guards
(specially awarded a gold medal).
TURNER, Capt. F. G., R.E.
KHAN BAHADUR SHER JUNG, Survey of India.
- 1911 .. LEACHMAN, Capt. G. E., The Royal Sussex Regiment.
GURMUKH SINGH, Jemadar, 93rd Burmah Infantry.

MACGREGOR MEMORIAL MEDALLISTS—(contd.).

- 1912 .. PRITCHARD, Capt. B. E. A., 83rd Wallajahabad Light Infantry (specially awarded a gold medal).
WILSON, Lieut. A. T., C.M.G., 32nd Sikh Pioneers.
MOHIBULLA, Lance-Dafadar, Q. V. O. Corps of Guides.
- 1913 .. ABBAY, Capt. B. N., 27th Light Cavalry.
SIRDAR KHAN, Sowar, 39th (K. G. O.), Central India Horse.
WARATONG, Havildar, Burmah Military Police (specially awarded a silver medal).
- 1914 .. BAILEY, Capt. F. M., I.A. (Political Department).
MORSHEAD, Capt. H. T., R.E.
HAIDAR ALI, Naik, 106th Hazara Pioneers.
- 1915 .. WATERFIELD, Capt. F. C., 45th Rattray's Sikhs.
ALI JUMA, Havildar, 106th Hazara Pioneers.
- 1916 .. ABDUR RAHMAN, Naik, 21st Punjabis.
ZARGHUN SHAH, Havildar, 58th Rifles (F.F.), (specially awarded a silver medal).
- 1917 .. MIAN AFRAZ GUL, Sepoy, Khyber Rifles.
- 1918 .. NOEL, Capt. E. W. C. (Political Department).
- 1919 .. KEELING, Lieut.-Colonel E. H., M.C., R.E.
ALLA SA, Jemadar, N.-W. Frontier Corps.
- 1920 .. BLACKER, Capt. L. V. S., Q. V. O. Corps of Guides.
AWAL NUR, C. Q. M. Havildar, 2nd Bn., Q. V. O. Corps of Guides. (Special gratuity of Rs. 200.)
- 1921 .. HOLT, Maj. A. L., Royal Engineers.
SHER ALI, Sepoy, No. 4952, 106th Hazara Pioneers.
- 1922 .. ABDUL SAMAD SHAH, Capt., O.B.E., 31st D. C. O. Lancers.
NUR MUHAMMAD, Lance-Naik, 1st Guides Infantry, F. F.
- 1923 .. BRUCE, Capt. J. G., 2/6th Gurkha Rifles.
SOHBAT, Head Constable, N.-W. F. Police.
HARI SINGH THAPA, Survey Department (specially awarded a silver medal).
- 1924 .. RAHMAT SHAH, Havildar, I.D.S.M., N.-W. F. Corps.
GHULAM HUSSAIN, Naik, N.-W. F. Corps.
- 1925 .. SPEAR, Capt. C. R., 5/13th Frontier Force Rifles.
JABBAR KHAN, Naik, 5/13th Frontier Force Rifles.
- 1926 .. HARVEY-KELLY, Maj. C. H. G. H., D.S.O., 4/10th Baluch Regiment.
- 1927 .. LAKE, Maj. M. C., 4/4th Bombay Grenadiers.
- 1928 .. BOWERMAN, Capt. J. F., 4/10th D. C. O. Baluch Regiment.
MUHAMMAD KHAN, Havildar, Zhob Levy Corps.
- 1929 .. ABDUL HANAN, Naik, N.-W. F. Corps.
GHULAM ALI, Dafadar, Guides Cavalry (specially awarded a silver medal).
- 1930 .. GREEN, Capt. J. H., 3/20th Burmah Rifles.

MACGREGOR MEMORIAL MEDALLISTS—(concl'd.).

- 1931 .. O'CONNOR, Capt. R. L., 1/9th Jat Regiment.
KHIAL BADSHAH, Naik, 1/13th Frontier Force Rifles.
- 1932 .. BIRNIE, Capt. E. St. J., Sam Browne's Cavalry.
SHIB SINGH NEGI, No. 4013, Rifleman, 10/18th Royal
Garhwal Rifles.
- 1933 .. ABDUL GHAFUR, Havildar, K. G. O. Bengal Sappers
and Miners.

UNITED SERVICE INSTITUTION OF INDIA.

PRIZE ESSAY GOLD MEDALLISTS.

(With Rank of Officers at the date of the Essay.)

- 1872 .. ROBERTS, Lt.-Col. F. S., V.C., C.B., R.A.
- 1873 .. COLQUHOUN, Capt. J. S., R.A.
- 1874 .. COLQUHOUN, Capt. J. S., R.A.
- 1879 .. ST. JOHN, Maj. O. B. C., R.E.
- 1880 .. BARROW, Lieut. E. G., 7th Bengal Infantry.
- 1882 .. MASON, Lieut. A. H., R.E.
- 1883 .. COLLEN, Maj. E. H. H., S.C.
- 1884 .. BARROW, Capt. E. G., 7th Bengal Infantry.
- 1887 .. YATE, Lieut. A. C., 27th Baluch Infantry.
- 1888 .. MAUDE, Capt. F. N., R.E.
YOUNG, Maj. G. F., 24th Punjab Infantry (specially
awarded a silver medal).
- 1889 .. DUFF, Capt. B., 9th Bengal Infantry.
- 1890 .. MAGUIRE, Capt. C. M., 2nd Cavy., Hyderabad Contingent.
- 1891 .. CARDEW, Lieut. F. G., 10th Bengal Lancers.
- 1893 .. BULLOCK, Maj. G. M., Devonshire Regiment.
- 1894 .. CARTER, Capt. F. C., Northumberland Fusiliers.
- 1895 .. NEVILLE, Lt.-Col. J. P. C., 14th Bengal Lancers.
- 1896 .. BINGLEY, Capt. A. H., 7th Bengal Infantry.
- 1897 .. NAPIER, Capt. G. S. F., Oxfordshire Light Infantry.
- 1898 .. MULLALLY, Maj. H., R.E.
CLAY, Capt. C. H., 43rd Gurkha Rifles (specially
awarded a silver medal).
- 1899 .. NEVILLE, Col. J. P. C., S.E.
- 1900 .. THUILLIER, Capt. H. F., R.E.
LUBBOCK, Capt. G., R.E. (specially awarded a silver
medal).
- 1901 .. RANKEN, Lt.-Col. G. P. P., 46th Punjab Infantry.
- 1902 .. TURNER, Capt. H. H. F., 2nd Bengal Lancers.
- 1903 .. HAMILTON, Maj. W. G., D.S.O., Norfolk Regiment.
BOND, Capt. R. F. G., R.E. (specially awarded a silver
medal).
- 1904 .. MACMUNN, Maj. G. F., D.S.O., R.F.A.

PRIZE ESSAY GOLD MEDALISTS—(concl'd.).

1905	..	COCKERILL, Maj. G. K., Royal Warwickshire Regiment.
1907	..	WOOD, Maj. E. J. M., 99th Deccan Infantry.
1908	..	JEUDWINE, Maj. H. S., R.A.
1909	..	MOLYNEUX, Maj. E. M. J., D.S.O., 12th Cavalry. ELSMIE, Maj. A. M. S., 56th Rifles, F. F. (specially awarded a silver medal).
1911	..	Mr. D. PETRIE, M.A., Punjab Police.
1912	..	CARTER, Maj. B. C., The King's Regiment.
1913	..	THOMSON, Maj. A. G., 58th Vaughan's Rifles (F. F.).
1914	..	BAINBRIDGE, Col. W. F., D.S.O., 51st Sikhs (F. F.). NORMAN, Maj. C. L., M.V.O., Q. V. O. Corps of Guides (specially awarded a silver medal).
1916	..	CRUM, Maj. W. E., V.D., Calcutta Light Horse.
1917	..	BLAKER, Maj. W. F., R.F.A.
1918	..	GOMPERTZ, Capt. A. V., M.C., R.E.
1919	..	GOMPERTZ, Capt. M. L. A., 108th Infantry.
1920	..	KEEN, Lt.-Col. F. S., D.S.O., 2/15th Sikhs.
1922	..	MARTIN, Maj. H. G., D.S.O., O.B.E., R.F.A.
1923	..	KEEN, Col. F. S., D.S.O., I.A.
1926	..	DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi- ment.
1927	..	HOGG, Maj. D. McA., M.C., R.E.
1928	..	FRANKS, Maj. K. F., D.S.O., 5th Royal Mahrattas.
1929	..	DENNYS, Maj. L. E., M.C., 4/12th Frontier Force Regi- ment.
1930	..	DURNFORD, Maj. C. M. P., 4/6th Rajputana Rifles.
1931	..	FORD, Lt.-Col. G. N., 2/5th Mahratta Light Infantry.
1932	..	THURBURN, Lt. R. G., The Cameronians (Scottish Rifles).
1933	..	Medal not awarded.
1934	..	DURNFORD, MAJ. C. M. P., 4/6th Rajputana Rifles.

NOTICE.

(i) With effect from the 1st January 1934, members of ten years' standing who retire from the Service may continue their membership on payment of the reduced subscription of £10/6 per annum.

(ii) Cadets of the Indian Military Academy are now eligible for membership of the Institution.

(iii) Officers of the Indian States Forces are eligible to compete in the Gold Medal Prize Essay Competition.

(iv) The revised Library Catalogue (1934) is now available and can be supplied to members and subscribers at Rs. 2/8/- per copy, plus postage.

GOLD MEDAL PRIZE ESSAY COMPETITION, 1934.

Nine essays, bearing the following mottoes, were received in the Gold Medal Prize Essay Competition for 1934 :—

1. Jamshed.
2. Omnia Vincit Veritas.
3. Jis ko lathi us ko bhainsa.
4. Homo plantat, Homo fodit,
Prudens irrigat custodit,
Sed fovente Deo prodit.
5. Jaisa des waisa bhes.
6. Veritas Omnia Vincit.
7. Tam marte quam minerva.
8. The adversaries of to-day are the collaborators of to-morrow.
9. Moralist.

The result of the competition and the winning essay are published in this issue of the Journal.

GOLD MEDAL PRIZE ESSAY COMPETITION, 1935.

The Council has chosen the following subject for the Gold Medal Prize Essay Competition for 1935 :—

“ It has been widely asserted that a decision in modern western warfare will be gained in the air.” Discuss this assertion illustrating your arguments with any modification you think necessary in the organisation of H. M.'s Forces for the defence of the British Empire.

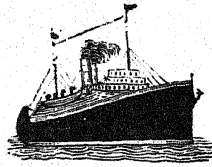
The following are the conditions of the competition :—

- (1) The competition is open to all gazetted officers of the Civil Administration, the Royal Navy, Army, Royal Air Force, Auxiliary Forces and Indian States Forces.
- (2) Essays must be typewritten and submitted in triplicate.
- (3) When reference is made to any work, the title of such work is to be quoted.
- (4) Essays are to be strictly anonymous. Each must have a motto and, enclosed with the essay, there should be sent a sealed envelope with the motto written on the outside and the name of the competitor inside.

Gold Medal Prize Essay Competition, 1935.

- (5) Essays will not be accepted unless received by the Secretary on or before the 30th June 1935.
- (6) Essays will be submitted for adjudication to three judges, chosen by the Council. The judges may recommend a money award, not exceeding Rs. 150, either in addition to or in substitution for the medal. The decision of the three judges will be submitted to the Council, who will decide whether the medal is to be awarded and whether the essay is to be published.
- (7) The name of the successful candidate will be announced at a Council Meeting to be held in September or October 1935.
- (8) All essays submitted are to become the property of the United Service Institution of India absolutely, and authors will not be at liberty to make any use whatsoever of their essays without the sanction of the Council.
- (9) Essays should not exceed 15 pages of the size and style of the Journal, exclusive of any appendices, tables or maps.

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1934.

§ California	..	Nov.	1	† Britannia	..	Nov.	27
§ Tuscania	15	* Castalia	..	Dec.	22

1935.

* Elysia	..	Jan.	26	* Castalia	..	June	15
† Britannia	..	Feb.	14	† Britannia	..	..	29
* Castalia	..	March	16	* Elysia	..	Sept.	4
§ California	..	..	28	* Castalia	..	Oct.	5
§ Tuscania	..	April	11	† Britannia	19
† Britannia	25	§ California	31
* Elysia	..	May	22	§ Tuscania	..	Nov.	14
				* Elysia	..	Dec.	2

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